

37th International Applied Military Psychology Symposium
Prague, 21 - 25 May 2001

IAMPS 2001 PROCEEDINGS

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

20030213 098

AQ F03-05-1001

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE June 2001		3. REPORT TYPE AND DATES COVERED 28-31 January 2001 Final	
4. TITLE AND SUBTITLE International Applied Military Psychology Symposium (37 th) Held in Prague, Czech Republic on 21-25 May 2001. IAMPS 2001 Proceedings.				5. FUNDING NUMBERS N00014-01-0-1057	
6. AUTHOR(S) Tomto, Anton, Editor					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Ministry of Defence of the Czech Republic Department of Social Policy Section of Personal and Social Policy MoD Tychonova 1 160 00 Prague 6 Czech Republic				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Office of Naval Research, European Office PSC 802 Box 39 FPO AE 09499-0039				10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES See: http://www.iamps.org/proceedings.htm This work relates to Department of the Navy Grant N00014-01-0-1057 issued by the Office of Naval Research International Field Office-Europe. The United States has a royalty-free license throughout the world in all copyrightable material contained herein.					
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited.				12b. DISTRIBUTION CODE A	
12. ABSTRACT (Maximum 200 words) The 37 th International Applied Military Psychology Symposium was held in Prague, Czech Republic on 21-24 May 2001. The IAMPS 2001 Proceedings includes both abstracts and papers of presentations. Topics include the consequences of current conflicts of limited (local) extent, the engagement of international armed forces in the conflicts, the impacts upon a creation of team structure and the role of the armed forces, the importance of military psychologists and scientists from the related fields in accomplishing their assignments.					
13. SUBJECT TERMS ONRIFO, Foreign Reports,				15. NUMBER OF PAGES	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL		

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102

Office of Naval Research International Field Office

Newsletter No. 8

The 37th International Applied Military Psychology Symposium (IAMPS),

“Changes in Emerging Conflicts in the 21st Century: Implications for Recruitment, Training and Performance.”

Sponsored by the Office of the Minister of Defence of the Czech Republic, the Chief of the General Staff of the Army of the Czech Republic, US Army, US Air Force and the Office of Naval Research International Field Office

Dr. Yvonne R. Masakowski, Associate Director, Human Factors

August 3, 2001

T A B L E O F C O N T E N T S
1. Summary
2. Background
3. Proceedings and Presentations
4. Workshop Process & Procedures
4.1 Workshop Results & Recommendations
5. Future Meetings
6. Assessment
7. Contacts

These reports summarize global activities of S&T Associate Directors of the Office of Naval Research International Field Offices (ONRIFO). The complete listing of newsletters and reports are available under the authors' by-line on the ONRIFO homepage: <http://www.ehis.navy.mil/> <http://www.ehis.navy.mil/onrnews.htm> or ONRIFO-Asia homepage: <http://www.onr.navy.mil/onrasia/>, or by email to respective authors.

Keywords

Military, Psychology, Recruitment, Retention, Training, Multi-national, Manpower, Workshop

1. Summary

ONRIFO co-sponsored the International Applied Military Psychology Symposium on **"Changes in Emerging Conflicts in the 21st Century"** in Prague, The Czech Republic (21 – 25 May 2001). The purpose of this meeting was to gather together world experts and provide a forum for focused discussion on the impact of changing missions and military organizations on recruitment, training, and performance.

Approximately 85 attendees from approximately 20 countries attended this symposium.

The theme of the symposium captured the impact of multi-national operations and limited conflicts on the development of a future military. This meeting provided an opportunity for members of the military research community to explore the following topics: 1) leadership and management, 2) psychological impacts of military service and, 3) the impact of personal characteristics on performance in peace support operations.

The products of the workshop are evident by the submission of several international research proposals under ONRIFO's Naval International Cooperative Opportunities Program (NICOP), and the agreement within the IAMPS membership community to organize and maintain a Virtual Military Community website. This website is aimed toward improving information sharing within the military research community and will provide updates regarding scheduled events, research progress reports and national military programs. In addition, members of the IAMPS community have agreed to establish an organizational team whose purpose will be to select the themes and topics for the meeting and lend support to host nations of future IAMPS meetings.

This newsletter is designed to inform national and international scientists, research and government institutions and international organizations about potential areas for research collaboration.

2. Background

ONRIFO sponsored the 37th Annual International Applied Military Psychology Symposium (IAMPS) in Prague, The Czech Republic. ONRIFO has traditionally sponsored these meetings as a means of bringing together military policy makers and researchers from the international military community in order to share information about their national programs. Recently, the format of the meetings changed from a series of presentations to a workshop. This format change facilitates greater dialogue and fosters the development of international research collaborations that will address military issues relevant to all nations.

The purpose of this meeting was to explore the impact of changing missions and military organizations on recruitment, training, and retention. The theme of this workshop, **"Changes in Emerging Conflicts in the 21st Century"** provided a context for nations to address the impact of multi-national missions on training and performance. The significance of this topic was highlighted by the fact that many nations, such as the Armed Forces of the Czech Republic and Croatia, are embarking on a new era in their military history. Each of these nations is moving toward an all-volunteer force rather than their traditional military based on conscripts. While this change in military organization may be limited to a few nations, these organizational changes are occurring at a time when each nation is faced with increased demands to support multi-national missions. In addition, while nations such as the United States and France are not presented with major reorganizations in their military, these nations are faced

with reductions in recruitment and retention as a result of increased opportunities for career growth in the private sector. Issues such as quality of life and retention move to the foreground as policy makers and researchers attempt to forge the military of the future for all nations.

The military of the 21st Century is currently under construction by policy makers, military leaders, and researchers throughout the world. Their decisions will shape the direction and formation of the individual soldier and/or sailor, the military organizational structure, and the way that military conflicts of the future will be managed.

Lastly, the aim of this symposium was to gather experts together for meaningful discussion and to foster the development of future research that will address these issues. In an effort to encourage international collaboration, ONRIFO announced a call for research proposals under the Naval International Cooperative Opportunities Program (NICOP) during this meeting to address these critical topics.

3. Proceedings & Presentations

IAMPS Proceedings and Presentations may be reviewed in full detail on the ONRIFO Website:
<http://www.ehis.navy.mil/onrnews.htm>

4. Workshop Process & Procedures

Following the presentation session, participants were invited to register for one of three workshop groups that focused on three topic areas: 1) leadership and management, 2) psychological impacts of military management and, 3) the impact of differences in personal characteristics on performance in peace support operations. During the workshop sessions, participants were asked to identify critical issues related to their topic and provide a prioritized list of key issues for their workshop topic.

At the end of this session, participants were asked to provide written comments concerning the reason(s) why they considered an issue to be important and to assess the prioritized list of issues identified within their respective groups. To facilitate group discussion, the issues were collated and classified according to level of importance.

Participants were asked to review the complete list and reach a consensus regarding issues of highest importance and feasibility for conducting research to address the issue.

4.1 Workshop Results & Recommendations

The following paragraphs summarize the topics identified in each of the three IAMPS workshop discussion groups. These issues reflect those prioritized as highly important and targets of opportunity for research collaboration.

Workshop # 1: Topic: Leadership and Management

(Chair: Lt Col F. Lescreve and Major T. Filjak): The topics identified for future development from this workshop are as follows:

<i>High Importance</i>	<i>Medium Importance</i>	<i>Low Importance</i>
Leader training and development	Identify leadership styles	Leadership selection
Competencies that leaders need	Leadership under stress	Leadership vs. Management
Implications for leaders of emerging missions	Commitment of leader to armed forces	Computer modeling of leadership
Developing and conveying leaders' vision	Leaders' adjustment to new technology	Distributed leadership
	Adjusting to new attitudes of youth	Decision Making
		Leader Credibility
		Leader influence on retention

- **Leadership Training and Development:** There is a need to establish a training program for military leaders responsible for multi-national peacekeeping operations. Leaders today are often presented with ad hoc teams comprised of individuals from a variety of nations. There is often a conflict in task performance due to cultural differences in training and chains of command.
- **Competencies that leaders need:** Due to an increase in multi-national missions around the world, there is a need to establish a common set of competencies that leaders will require to perform their duties. For example, cultural understanding of the socio-political environment in which the operation is occurring represents a topic for potential research collaboration.
- **Implications for leaders of emerging missions:** Leaders in multi-national missions need to understand the impact of their presence within the civilian community where many of these operations occur. The presence of multi-national troops a civilian region presents challenges to the civilian population that may have socio-political consequences.
- **Developing and conveying leaders' vision:** There is a need to develop a common method of communication that would enhance conveying the leader's vision during these missions.

Workshop # 2: Psychological Impacts of Military Service

(Chair: Dr. H. Slop and Dr. W. Weber): The topics identified for future development from this workshop are as follows:

High Importance:

- **Prevention and Treatment of negative effects after deployment** Why
is the job of the soldier becoming less important?
How do we prepare troops to cope with inter-cultural differences in the military that they will face during multi-national missions?
- **Quality-of-Life Issues:** There is a need to address quality of life issues to secure recruitment and retention in the military. This group proposed a study to address this issue including an international survey on retention, attrition and job satisfaction.
- **Performance Issues:** There is a need to address the impact of inter-cultural differences on military job performance. Multi-national missions place an increased demand on individuals to perform within an unknown context for an uncertain period of time. The group proposed that an inter/intra-country survey be conducted to evaluate the impact of deployment and long term performance in multi-national missions. (*OPTEMPO –US Army study, Germany was cited as an example and is one way of approaching these issues.)
- **Reintegration Issues:** Following deployment and return to the home base and/or family, there has been an increase in the negative effects of deployment to multi-national missions. In order to reduce the negative impact of long term deployment in multi-national missions, the group proposed a study that would provide pre-deployment counselling and therapy, as well as individual and/or family support post-deployment to ensure positive reintegration.

Low Importance:

- What are the new requirements in training to support new technologies?

Workshop # 3: Topic: The Impact of Differences in Personal Characteristics on Performance in Peace Support Operations:

(Chair: Dr. Yvonne Masakowski and Dr. J. Mylle): The topics identified for future development from this workshop are as follows:

- **Personality Differences:** National selection programs offer a variety of psychological test batteries to evaluate personality and aptitudes for training. To facilitate the development of an international tool to evaluate personality differences and standards, participants agreed that it was necessary to establish common criteria for personality evaluation among nations.
- **Evaluation:** The group proposed a workshop could be organized to collect information from experts. Panel members suggested that this group could develop a strategy for collecting and distributing data among nations.
- **Performance and bio-psycho-social aspects of stress:** Group participants proposed that a common metric and instrument should be developed that would assess the bio-psycho-social aspects of stress and performance. Data would be collected, evaluated and distributed in an attempt to provide accreditation, validation and verification of performance standards.

5. Future Meetings

LOCATION	DATE	SUBJECT
Madrid, Spain	Feb 02	Shaping the Perception of the Military in the 21 st century
Warsaw Poland	Mar 02	Crew Resource Management
Vienna Austria	TBD	Computer software for the military

6. Assessment

The 37th International Applied Military Psychology Symposium focused on the topic, “**Changes in Emerging Conflicts in the 21st Century**”. The theme of this symposium highlights the impact of an increase in multi-national missions and its influence on each nation’s military organization, plans and programs. This symposium provided military leaders and world experts in military research an opportunity to focus on the effects of changes in military missions and their impact on recruitment, training, long term deployment, retention, and quality of life issues.

The discussions held at this meeting facilitated the identification of critical issues in multi-national missions such as effective leadership training, psychological support for troops in the field, and inter-cultural differences. Specific attention was given to military management in the field and the difficulties associated with leadership in a multi-national military setting.

The discussions held at the workshop encouraged nations to explore opportunities for collaborative research to address these issues. Belgium offered to direct the development of the research proposal to establish a virtual military community website. The aim of the virtual military community is to provide a forum that will enable members of the military research community to share information and announcements of military meetings within and among nations. This website would be a membership-owned and managed -site which would be the first of its kind to support military research for all nations.

Participants expressed a need to continue the dialogue that began at this meeting. Poland, Spain and Austria announced their interest in hosting a focused workshop on topics in their respective countries. Participants’ enthusiasm to extend the discussions on military research topics reflects the struggle that each nation is facing in their attempt to reorganize their nation’s military. For some nations, such as the Czech Republic and Croatia, this is the beginning of a new era for their military. They face many challenges as they attempt to build their military in a climate of reduced military budgets and increasing demands to support multi-national missions.

The annual IAMPS meeting serves a critical need for military researchers by providing a forum for nations to share their experiences and explore different approaches to recruitment, training, and retention. The most significant outcome of the IAMPS meetings is the development of collaborative research to address issues that affect all nations. The coordination of military research is especially critical at this time because there is an increasing demand for a joint military presence that has unclear boundaries in terms of borders or time.

Traditional military assignments have been replaced by missions characterized by demanding peacekeeping assignments fraught with constant threat, cultural adjustments, the infusion of the media and ill-defined goals. The uncertainty associated with long-term deployment in support of a peacekeeping mission leads to increased stress among military personnel, reductions in retention and an increase in the potential of negatively impacting the socio-political environment in which these military operations occur.

Therefore, each of these nations is eager to coordinate their military programs with those of the US in

order to ensure more effective multi-national missions. The success of future military multi-national missions rests on the ability of the military research community to anticipate and provide adequate training and support for their nation's military serving in that arena. IAMPS meetings and workshops play a pivotal role in ensuring the success of their military research required to support missions of the future.

(Note: Please refer to ONRIFO HF website for more details on all presentations, grants and programs: <http://www.ehis.navy.mil/tp/humanscience/default.asp>)

7. Contacts:

1) Dr. Anton Tomko
Department of Social Policy
Ministry of Defence
Tychonova 1
160 01 PRAGUE 6
Czech Republic
Phone: +420 2 20 21 20 18 or by
Fax: +420 2 24 31 11 69
Email: IAMPS@seznam.cz

2) Dr. Yvonne R. Masakowski
Associate Director, Human Factors
Office of Naval Research International Field Office
Address Removed, London
Postcode Removed UK
Tel: +44 (0) 207 514 4942
Fax: +44 (0) 207 723 6359
Email: ymasakowski@onrifo.navy.mil

The Office of Naval Research International Field Office is dedicated to providing current information on global science and technology developments. Our World Wide Web home page contains information about international activities, conferences, and newsletters. The opinions and assessments in this report are solely those of the authors and do not necessarily reflect official U.S. Government, U.S. Navy or ONRIFO positions.

Return to ONRIFO Newsletters

This Work relates to Department of the Navy Grant N00014-01-1-1057 issued by Office of Naval Research International Field Office. The United States Government has a royalty-free license throughout the world in all copyrightable material contained herein.

Proceedings

37. IAMPS PRAGUE, 21st - 25th May 2001

Editors:

**PaedDr. Anton Tomto
Mgr. Radek Ptáček
Ing. Martin Kujal
Mgr. Martin Podhorský**

Contents

<i>Programme of the Symposium</i>	5
<i>Welcoming Addresses and Opening Presentations</i>	10
<i>Abstracts</i>	17
<i>Papers</i>	37
<i>Fernando Fradique¹⁾, Aurélio V. M. Pamplona²⁾, António B. da Costa³⁾: Personal Overview of 10 Years on IAMPS: Retrospective and Perspective.</i>	37
<i>Luc Leveille: Relationship between Leadership styles and Personality Factors in Army Unit.</i>	43
<i>Beatrice van Zevenbergen-Snel: PRISMA: Developments in collecting management information.</i>	51
<i>Gheorge Pertea, Silvia Isari: Test Correlates of Military Success in a Special Force Intensive Training Exercise Conducted in English.</i>	56
<i>Alvaro Oliviera: Study on Motivation of Young People to Join the Army.</i>	60
<i>Suzana Stefan, Sanja Bender-Horvat, Goran Tislaric: Commissioned and Non-Commissioned Officer's Attitudes on Women in the Military.</i>	73
<i>Sergey Lytaev: Augmentation-Reduction: Estimation of Perceptive Processes for Personnel Selection.</i>	82
<i>Hans Jetten: Pressure of Deployment and Turnover among Military Personnel.</i>	86
<i>Jacques Mylle: Perceived Team Efficacy in Peace Support Operations.</i>	92
<i>Helmut Slop: Military Psychology at the Austrian International Peace Support Command.</i>	98
<i>Kateřina Bernardová: Purpose, Objectives, and Goals of the Field Military Psychology of the Army of the Czech Republic.</i>	102
<i>Amy B. Adler, Carl Andrew Castro: The Impact of Lost Leave on the Medical Readiness of US Soldiers: It's not a European Vacation.</i>	105
<i>Lassak Werner: Experiences of military psychologist from peace-keeping mission in former Yugoslavia.</i>	115
<i>Tomislav Filjak, Anto Zelic, Zelimir Pavlina: A Framework of Psychological Preparation and Survey of Psychological Condition of Croatian Participants in UN Missions.</i>	117
<i>Kateřina Bernardová, Daniel Štrobl, Josef Falář, Barbora Palánová: Process And Dynamics of the Psychosocial Conditions for Members of KFOR During Their Deployment.</i>	124
<i>Weber Wolfgang: Critical Incident Stress Management in the bundeswehr.</i>	127
<i>Klose Jiri, Brichcin Milan: Stress diagnostic of Cognitive Operations.</i>	131
<i>Mladen Trlek: Risk Factors of Military Discipline Violation.</i>	144

<i>Marek Preiss¹, Havlíček, J.², Flegr, J.², Jiri Klose³: Influence of latent toxoplasmosis on some personality and performance parameters on conscripts.....</i>	<i>155</i>
<i>Tichý Vlastimil, Kral Pavel: Preparing Organizations of Acute Crise Intervention at Disaster in the Czech Republic.....</i>	<i>159</i>
<i>Kral Pavel: System of psychological selection in the Czech armed forces.....</i>	<i>161</i>
<i>Barbara Jacobi : Being a Soldier in the Danish International Brigade.....</i>	<i>164</i>
<i>Petr Jandejsek, Hana Červinkova, Michal Kopecký, Jaroslav Sykora: PSYOP as a challenge for Military Operations in the 21st Century.....</i>	<i>170</i>
<i>Preiss Marek¹, Klose Jiri²: Personality disorders diagnostics through the C.R.Cloninger's theory.....</i>	<i>175</i>
<i>F. Lescreve, B. Schreurs: Improving Military Recruit Quality Through Smart Classification.....</i>	<i>181</i>
<i>Dylan Schmorrow, George Solhan, Jim Templeman, Laura Worcester, James Patrey: Virtual Combat Training Simulators for Urban Conflicts and Performance Testing.....</i>	<i>187</i>
<i>Patrick Boss: The Swiss Army Outdoor Assessment Center for the Selection of Future Officers.....</i>	<i>191</i>
<i>Falář Josef, Miroslava Klabanová, Bolek Emil, Dvořáková Květa: Monitoring of the Drug Abuse Among Conscript of the Czech Armed Forces.....</i>	<i>194</i>
<i>Murray W. Rowe: Battling U.S. Navy Attrition through Science and Technology.....</i>	<i>197</i>
<i>Pavlikova Eva: Pathologic Phenomena in the Society.....</i>	<i>203</i>
<i>Brancik Jiri: The psychologist in foreign mission. The duty of the psychologist in the mission.....</i>	<i>205</i>
<i>Dylan Schmorrow, Laura Worcester, James Patrey: Augmented Cognition: New Design Principles for Human-Computer Symbiosis.....</i>	<i>207</i>
<i>Closing Remarks.....</i>	<i>211</i>
<i>List of Participants.....</i>	<i>214</i>

Programme of the Symposium

Monday, 21 May 2001

Hotel PRAHA - Cinema Hall

8⁴⁵ - 10⁰⁰ **Registration of Participants**

10⁰⁰ - 12⁰⁰ **Opening of the Symposium**

Welcoming Addresses and Opening Presentations

- **Col. Ing. Milan Macel**, *Deputy Director, Section of Personal and Social Policy, Ministry of Defence of the Czech Republic*
- **Capt. Steven Smolinski**, *Commanding Officer, Office of Naval Research International Field Office, USA*
- **BrigGen. Ing. Pavel Stefka**, *Chief Operations Section (J3) of General Staff*

Chairperson: Maj. Carl Castro

- **LtCol. MUDr. Petr Navratil**, *Director of the Departement of Social Policy, Ministry of Defence of the Czech Republic*
- **LtCol. Jiri Klose, PhD.**, *Medical Psychology Main Expert of the Military Health Service Department of the Army of the Czech Republic on behalf of Surgeon General of the Czech Defence Forces, Brigadier - General Jan Petras, MD*
- **Rear Admiral Craig Dorman, PhD.**, *Senior Scientist, Office of Naval Research, USA*

12⁰⁰ - 12³⁰ **Official Group Photo**

12³⁰ - 14⁰⁰ **Lunch Break**

14⁰⁰ - 15³⁰ **Topic 1: Leadership and Management**

Chairperson: Tomislav Filjak

- **PAMPLONA AURELIO - PORTUGAL**
A personal overview of 10 years on IAMPS (1991-2001): Retrospective and prospective
- **LEVEILLE LUC - CANADA**
Relationship between Leadership styles and Personality Factors in Army Unit
- **VAN ZEVENBERGEN BEATRICE - NETHERLANDS**
PRISMA: Developments in collecting management information

- **PERTEA GHEORGHE - ROMANIA**

Test-Correlates of Success of the Romanian Military Personnel Participating in an intensive Training Exercise For Special Forces Conducted in English

15³⁰ - 16⁰⁰**Coffee Break**16⁰⁰ - 17³⁰**Chairperson: Dylan Schmorrow**

- **PATREY JAMES - USA**

Job Satisfaction of Military Faculty at a U.S. Service Academy

- **OLIVIERA ALVARO - PORTUGAL**

Study on Motivation of Young People to Join the Army

- **BENDER - HORVAT SANJA - CROATIA**

Commissioned and Noncommissioned Officers' Attitudes on Women in the Armed Forces

- **LYTAEV S.A. - RUSSIA**

Phenomenon "Augmentation-Reduction" During Personnel Selection

*Military Club*19³⁰ - 21³⁰**Welcoming Reception**

(uniform or formal dress requested)

Tuesday, 22 May 2001

*Hotel PRAHA - Cinema Hall*9⁰⁰ - 10³⁰**Topic 2: Psychological Impacts of Military Service****Chairperson: Hans Jetten**

- **JETTEN HANS - NETHERLANDS**

Pressure of Deployment and Turnover among Military Personnel

- **MYLLE JACQUES - BELGIUM**

Perceived Team Efficacy in Peace Support Operations

- **SLOP HELMUT - AUSTRIA**

Deployment of Psychology within the Austrian International Support Command

- **BERNARDOVA KATERINA - CZECH REP.**

Purpose, Objectives and Goals of the Field Military Psychology of the Army of the Czech Republic

10³⁰ - 11⁰⁰**Coffee Break**11⁰⁰ - 12³⁰**Chairperson: Aurelio Pamplona**

- **ADLER AMY - USA**

The Impact of Lost Leave on the Medical Readiness of US Soldiers: It's Not a European Vacation

- **LASSSAK WERNER - CZECH REP.**

Current Experience of a Military Psychologist from the Peacekeeping Operations in Former Yugoslavia

- **FILJAK TOMISLAV - CROATIA**
Psychological Preparation and Survey of Psychological Condition of Croatian Participants in UN Missions
- **STROBL DANIEL - CZECH REP.**
Process and Dynamic of the Psychosocial Conditions of the Members of the Mission KFOR During their Deployment

12³⁰ - 14⁰⁰**Lunch Break**14⁰⁰ - 15³⁰**Chairperson: Jacques Mylle**

- **WEBER WOLFGANG - GERMANY**
Critical Incident Stress Management in the Bundeswehr
- **KLOSE JIRI - CZECH REP.**
Stress Diagnostic of Cognitive Operations
- **TRLEK MLADEN - CROATIA**
Risk Factors and Discipline Violation
- **PREISS MAREK - CZECH REP.**
Influence or Latent "asymptomatic" toxoplasmosis on some personality and performance parameters on conscripts
- **TICHY VLASTIMIL - CZECH REP.**
Preparing Organizations of Acute Crise Intervention at Disaster in the Czech Republic

15³⁰ - 16⁰⁰**Coffee Break**16⁰⁰ - 17³⁰**Chairperson: Patrick Boss**

- **KRAL PAVEL - CZECH REP.**
The Psychological Selection System in the Army of the Czech Republic
- **JACOBI BARBARA - DENMARK**
Being a soldier in the Danish International Brigade
- **JANDEJSEK PETR - CZECH REP.**
PSYOP as a Challenge for Military Operation in the 21st Century
- **PREISS MAREK - CZECH REP.**
Personality Disorders Diagnostics Through the C.R. Cloninger's Theory

Wednesday, 23 May 20019³⁰ - 11⁰⁰**Excursion to Prague Castle**12⁰⁰ - 13³⁰**Lunch - SVS Komorni Hradek**14⁰⁰ - 17⁰⁰**Excursion to Chateau Konopiste**17³⁰ - 19⁰⁰**Dinner - SVS Komorni Hradek****Thursday, 24 May 2001***Hotel PRAHA - Banquet Room*9⁰⁰ - 10³⁰**Topic 3 : Recruitment, Personal Selection, Training**

Chairperson: Amy Adler

- **LESCREVE FRANCOIS - BELGIUM**
Using Smart Classification Technology to Improve Military Recruit Quality
- **SCHMORROW DYLAN - USA**
Virtual Combat Training Simulators for Urban Conflicts and Performance Testing
- **BOSS PATRICK - SWITZERLAND**
The Swiss Army Outdoor Assessment Center
- **LINDHOLM MERETE - DENMARK**
Re-interviews of Military Students who Break off their Educations and Training too soon
- **FALAR JOSEF - CZECH REP.**
Monitoring of Drugs among Conscripts of the Czech Armed Forces

10³⁰ - 11⁰⁰**Coffee Break**11⁰⁰ - 12³⁰**Chairperson: Wolfgang Weber**

- **ROWE MURRAY - USA**
Battling US Navy Attrition Through Science and Technology
- **PAVLIKOVÁ EVA - CZECH REP.**
Social-pathological phenomenos in the Czech Armed Forces and Czech Society
- **BRANCIK JIRI - CZECH REP.**
Psychologist in a Foreign Peacekeeping Mission
- **SCHMORROW DYLAN - USA**
Augmented Cognition: New Design Principles for Human-Computers Symbiosis

12³⁰ - 14⁰⁰**Lunch Break**14⁰⁰ - 15³⁰**Workshops and poster section**

- **ROOM 1** *Banquet Room1*
Leadership and Management
Moderators: T.Filjak, F.Lescreve
- **ROOM 2** *Banquet Room2* Psychological
Impacts of Military Service
Moderators: H. Slop, W.Weber
- **ROOM 3** *Banquet Room3* Recruitment,
Personal Selection, Training
Moderators: Y.Masakowski, J.Mylle

Poster section:

PALANOVA BARBORA, ZACKOVA GABRIELA
CZECH REP.

Psychosocial Situation of the Czech SFOR Unit

15³⁰ - 16⁰⁰ **Coffee Break**

16⁰⁰ - 17³⁰ **Workshops and poster section - Continuation**

Military Club

19³⁰ - 22⁰⁰ **Official Reception**
(uniform or formal dress requested)

Friday, 25 May 2001

Hotel PRAHA - Cinema Hall

9⁰⁰ - 10³⁰ **Reports from Workshops**
Plenary Discussion

10³⁰ - 11⁰⁰ **Coffee Break**

11⁰⁰ - 12³⁰ **Concluding Remarks**

- **Dr. Yvonne Masakowski**, *Associate Director, Human Factors, the Office of Naval Research International Field Office, USA*
- **Dr. Murray Rowe**, *Technical Director, Navy Personnel Research, Studies and Technolog, USA*
- **LtCol. MUDr. Petr Navratil**, *Director of the Departement of Social Policy, Ministry of Defence of the Czech Republic*

Closing of the Symposium

12³⁰ - 14⁰⁰ **Lunch Break**

13³⁰ - 14¹⁵ **Press Meeting**

Welcoming Addresses and Opening Presentations

PaedDr. Anton Tomko,

Executive Manager of IAMPS 2001, Section of Personal and Social Policy, Ministry of Defence of the Czech Republic.



Dr. Tomko, Executive Manager and the Main Psychologist of Ministry of Defence of the Czech Republic welcomed all participants of 37. IAPMS and thanked to all who supported and enabled this meeting. Mainly he expressed deep appreciation to Dr. Masakowski for her kind and open support.

At the end of his speech he overviewed importance of 37. IAPMS for all participants and the future of psychology in the Military system.

Col. Ing. Milan Macel,

Deputy Director, Section of Personal and Social Policy, Ministry of Defence of the Czech Republic

Ladies and gentlemen,

It gives me a great pleasure to be delegated to welcome you, the participants of the 37th International Symposium on Military Applied Psychology (IAMPS 2001), on behalf of the Czech Republic Minister of Defense. We appreciate the fact that this important event, discussing the changes in the newly arisen conflicts in the 21st century, is held in the Czech capital – Prague – from the purely professional point of view as well.

That is namely just the Czech Republic which, as a NATO “junior” member, is attempting to accommodate optimally its armed forces to the challenging required standards. In order that this process runs smoothly and purposefully, also the military psychologists have been given the chance to contribute.

Any new period is always accompanied by new characteristic phenomena. The conflicts of the passed 20th century are naturally followed by the conflicts of this beginning century that cannot be solved only on the basis of the time-tested experience. The contention that “the history repeats

time after time" suddenly loses its foundations. The appearance of the new character conflict is accompanied by a chain of related changes, no matter whether tied to the character of these conflicts, their center or extent, including the changes originated in consequence or only expectations of these conflicts which challenge the current armed forces, thus the Army of the Czech Republic as well. The comprehensive support of the armed forces, applying the demanding requirements on soldiers' recruitment, training and performance in the newly arisen conditions, also calls for an assistance of a high-quality psychological service.

It is true that we paid a high attention to the build-up of this psychological service during the last years, however, just nowadays, from the perspective of the above mentioned development, we need to enhance its practical efficiency which is particularly triggered by the increasing necessity for speedy professionalization of the ACR

Psychologists have to contribute, not only in dealing with the problems in the area of so frequently discussed recruitment, but also they must pay an attention to the process stabilizing the career soldiers. In the framework of applied psychology, they have to dedicate a portion of their work to the individual and team life of the military personnel, analyze stress and its possible impacts, human relations including the application of the principles of human rights, life-quality of soldiers, family care and the level of social counselling.

In practice, current organization of the applied military psychology cannot stay aside neither from the incoming activities of a new character already involving a participation of the integrated international forces, nor from the issue of reintegration including new generations of future veterans. In neither case, this service should fail in the course of a psychological operation.

Ladies and gentlemen, I do believe that the IAMPS 2001 offers enough opportunities to discuss the topics that are common to all of us, share the already gained experience, verified knowledge and particularly the new tested approaches. I wish you a good working environment and also enjoyable professional experiences while staying in one of the most ancient and attractive European city.

Brig.Gen. Ing Pavel Stefka,
Chief Operations Section (J3) of General Staff.



Ladies and Gentlemen,

It is a great honor for me to welcome you in the name of the Chief of the General Staff of the Army of the Czech Republic.

The 37th International Symposium of the Applied Military Psychology (IAMPS 2001) is an event important not only from the scientific, social respect but at first – let me to highlight it – from the purely military point of view. The military psychology plays an irreplaceable role in modern armed forces and, consequently in the Army of the Czech Republic, too. And each year, this role with every new task is increasing. Catalyst of this process is not only slow social changes in the Czech Republic, in Europe and practically all over the world. The results of technical progress, newly developed life conditions, ecological barriers, but also own conflicts of the first century of the third millenium to which the armed forces must respond to already in the phase of preparation.

That is why we welcome this Symposium, the topic of which includes the consequences of current conflicts of limited (local) extent, the engagement of international armed forces in these conflicts, the impacts upon a creation of team structure and the role of the armed forces, the importance of military psychologists and scientists from the related fields in accomplishing their assignments.

We expect that a discussion will be devoted to especially the issues of replacement of the armed forces, recruitment, exchange of experience with the recruits applicable in practice, for example in their transition from the civilian into the military environment (so called retention problems). An attention should be given to the issues of individual and team training (incl. reforming the team), situational and operational conditions, and thus the research of stress and its influence on the performance. Important is also the role of changes in leadership during conflicts, relations between individuals, problems of cultural differences, problems of equal right of national minorities and equal chances of men and women, moreover in some respect intercultural confusion, etc. Considered should be also a set of problems concerning the reduction of numbers of the armies, dislocation of soldiers with seeking their new identity, quality of life, family care and consultancy. Currently, it is necessary always to take into account an engagement of

integrated international forces, and for that objective, it is necessary to tailor the existing organization of applied military psychology.

Mentioned was also a necessity to take care about new veterans, and issues of reintegration and psychological operations themselves. Within the framework of co-operation, each participating country was requested to present the most pressing problems, the military psychology is coping with.

Yet, we have some problems we also have the foundations we can start from.

The Army of the Czech Republic Psychological Service consists of:

clinical psychology

military psychology

psychology of the military education

Traditionally, the clinical psychology has the highest level. Its structure, personal manning and material support is on a very good standard and to that correspond also its excellent results. The activities of clinical psychology are closely connected with the military medical and hospital system appropriately improved and supplemented.

The military psychology is focussed directly toward the troops. It is still restructuring and emphasis is placed on quality, since it carries the burden of tactical engagement, direct participation in special operations, and the like. If the clinical psychology represents the climax of the Army of the Czech Republic psychology, then the military psychology is its core.

The basis of military psychology, especially when considering the anticipated professionalization of the Army of the Czech Republic will be the psychology in military education. In addition to its irreplaceableness in the area of scientific research and development, it is just the psychology in military education that should assist in thinking of future commanders. The future commanders should master the necessary foundations of this field of science for their future work. It will not only mean to widen the horizons in thinking of the career soldiers, but also a possibility of use the offered knowledge and effective application of approved methods and procedures.

I am very glad ladies and gentlemen that the focus of IAMPS 2001 is on the applied military psychology. Even when the integrity of the psychological science cannot be cast doubt on, its application can be very specific based on environment and special intention. And just the military environment and conditions of military service were always the most demanding which at the present time, in changes of security situation is more and more important.

I would like to wish you ladies and gentlemen to accomplish the objectives of your Symposium and much success in your future career.

LtCol. MUDr. Petr Navratil,

Director of the Department of Social Policy, Ministry of Defence of the Czech Republic.



Ladies and Gentlemen,

I should like to give you a cordial welcome - as the director of the section of personnel policy and, at the same time, the guarantor of this symposium. Allow me make use of this opportunity for making you roughly acquainted with the program of the social policy of the sector of defense. The main goal of the social policy of the Sector consists in creating such social security for all the sector's employees that they are motivated enough for accomplishing both the tasks related to the defense of sovereignty of the Czech Republic, and to the UN and NATO's war and peace-keeping operations. At the same time, this policy seeks for creating such conditions at the work market that make it possible to recruit professional personnel sufficient in number, structure, and quality.

The means for getting this goal has consisted in submitting the project of complex solution of the situation in the social field. I mean the concept of the sector's social policy, concept of psychological service, concept of human service, concept of cultural security, and the concept of socially pathological phenomena.

The "Concept of the social policy of the Ministry of Defense" involves the set of measures taken for getting the stated goals and it defines the main programs. The highest priority is the family policy within whose framework the program of the Strategy of housing in order to support the family background of militaries is dealt with.

Besides that, the social policy of the Sector is aimed at the provision of education, professional and specially oriented growth seeking to emphasize even positions of men and women, create favorable working and living environment, get higher quality of medical care, providing conditions of development of culture, sport and recreation, get higher quality of material security and development of the care of military veterans and pensioners.

The basic document for the development of the psychological service is the MoD order issued in the year 2000 - "Establishment of the psychological service in the sector of MoD". The post of the main MoD psychologist subordinate to the director of the MoD social policy and the post of the GS troops psychologist directly subordinate to the Chief of General Staff have been established. Board of Psychological Service has been established as an advisory body of the main psychologist.

Progressively the posts of troop psychologists are being created at the operational command levels at the selected brigades, bases, regiments, and battalions. Posts of assistant psychologists for the soldiers of compulsory military service are being introduced.

At present time, the "Concept of psychological service" is being developed. The new concept is aimed at getting higher quality of care of people for building up the professional armed forces with fully ensured social services. When ensuring a more perfect utilization of the leisure time and universal care of the human potential of the Czech Republic Armed Forces a close co-operation with human, clerical, medical and juridical services is indispensable.

On the basis of the "Concept of human service" and the Minister of Defense Order, the human service has been established in 1995. Since 1997, the performance of the human service at the troops level is controlled by the section of social policy of the Ministry of Defense.

The human service is mainly aimed at the social-juridical field. This service provided the assistance particularly in the form of social consultancy for solving personal and family problems, the topics concerning the military's personality and his rights. Furthermore, in solving the problems related to the performance of their duties (access to superiors, human relations). Attention is devoted to the field of socially pathological phenomena prevention, information on the Geneva agreements, the other international conventions within this field and development of the project in the field of leisure time utilization. The professional education of the Czech Republic Armed Forces members in the field of human service continues at the Brno Military Academy in the form of three-semester distance studies of humanities. The evaluation made by the commanders and results of social research give evidence in favor of the development of that service.

Concept of cultural security in the sector of defense" was approved by the Minister of Defense in the year 1999. This Concept is conceived as the summary of activities that contribute to the development of the positive properties of the sector's members by utilizing the leisure time actively and by improving their working environment. It helps overcome the monotony resulting from the purpose-defined orientation of the Armed Forces, it releases the human creativeness and cultivates the environment of all of their members.

The Concept of prevention of socially pathological phenomena" was developed for the first time in 1995. That concept then was the basis for the material establishing the main directions of the preventive actuation in the years 1999 and 2000, and then 2002 through 2004. One of the tasks of the section of social policy of the MoD consists in creating the system of prevention of those negative phenomena and in coordinating the efforts of all components of the Ministry of Defense and of the Armed Forces themselves.

Responsible for the above mentioned prevention are the commanders who have established their boards mainly incorporating the psychologists, employees of human service, personnel specialists, members of military police and military physicians. Since 1996 the Ministry of Defense has assigned financial resources for that purpose.

At present time, the provisioning of these activities obey the stipulations of the Minister of Defense Order for preventing toxicology, alcoholism and other socially pathological phenomena. Education of the military professionals, particularly commanders for teaching them how to positively influence the subordinates, educational and cultural activities organized for the soldiers of military compulsory service, and the offer of attractive possibilities of utilizing their leisure time mainly for cultural and sport events are the main directions of that prevention. New is also the solution of the points at issue of the even position of men and women within the MoD sector. In 1998, a team for dealing with the evenness of men and women was established.

Its activities are closely linked up, at the inter-sector level, with the Ministry of Labor and Social Security. The team follows the legislative measures, presents that problem in the sector press and makes analyses of duty (work) conditions of women within the MoD sector, because these problems rather result from misunderstanding of the essence of the evenness of positions of men and women, not from lack of the good will. For that purpose contacts with the Women Committee of NATO Armed Forces was established and the Czech Republic has its representatives there.

At the time being, by the Czech Republic Government's decision – connected to the intended professionalization of the Armed Forces – other priorities of the social policy – such as family policy involving cultural, regeneration and educational family programs, consultancy, including the material and financial supports and the programs for young militaries recently recruited to the Armed Forces - are being developed.

The cooperation in that task takes place with governmental and inter-sector bodies and organizations, which deal with social issues.

We are striving for improving the efficiency of the social policy. One of the ways that gave good results is an effective cooperation of the psychological service with the other services of the Czech Republic Armed Forces, mainly with the human ones. Within the framework of that collaboration, further utilization of the applied psychology takes place.

Dear ladies and gentlemen, I wish you find creative working comfort here and you get great success both in your labor and in the collaboration with other services and components of the armed forces, too.

LtCol. Jiri Klose, PhD.,

Medical Psychology Main Expert of the Military Health Service Department of the Army of the Czech Republic on behalf of Surgeon General of the Czech Defence Forces, Brigadier - General Jan Petras, M.D.



Dr. Klose, Medical Psychology Main Expert of the Military Health Service Department of the Army of the Czech Republic, welcomed participants of 37. IAMPS conference on behalf of Surgeon General of the Czech Defence Forces, Brigadier - General Jan Petras, M.D.

In his speech he shortly described history, importance and goals of Psychology in the system of Military Medicine. He underlined state position of Medical Psychology in the State Military Medicine Practice. He also stressed the role of new technologies and computerization in the area of Psychology.

At the end of his speech he evaluated importance of the 37. IAMPS symposium and wished a nice and creative week.

Abstracts**Amy B. Adler****Carl A. Castro***US Army Medical Research Unit-Europe**Walter Reed Army Institute of Research***THE IMPACT OF LOST LEAVE ON THE MEDICAL READINESS OF US SOLDIERS:
IT'S NOT A EUROPEAN VACATION.**

Soldiers in the U. S. Army work hard. As a result, their 30 days of leave a year and their passes issued by commanders provide them a break from an otherwise relentless pace of military operations. As part of a 2-year longitudinal study of the impact of operations tempo on soldiers stationed in Europe, we are assessing the impact of operations tempo on soldiers stationed in Europe, we are assessing the impact of workload on soldier and unit readiness. The soldiers in this study (N=665) worked an average of 10,9 hours per day, 5,4 days a week, took part in 31 days of field exercises in 6 month, and deployed an average of 2 times per year. The reality of this hectic schedule is that soldiers are not guaranteed that they can take the leave time they have earned - their leave time may be cancelled, accumulated as part of the following year's total or simply lost (if there is no opportunity to take it). In our sample, soldiers reported taking an average of 17,3 days of leave in the past 12 month and losing 1,5 days (SD=5,25). We examined the role of leave taken and leave lost in predicting physical health. In a series of moderated multiple regression analyses, we found that while the number of leave days taken did not predict physical symptoms, lost leave days did. Specifically, lost leave days significantly predicted physical symptoms, and this relationship was moderated by soldier perceptions of task significance, recognition, and leadership at both the officer and non-commissioned officer level. These findings highlight the importance of leadership at the local level for ensuring the medical readiness of the forward-deployed soldier.

Paul T. Bartone*United States Military Academy**West Point, New York 10996, USA***HARDINESS, GENDER AND LEADER EFFECTIVENESS IN WEST POINT CADETS.**

The present study explores the role of personality hardiness as a stress-resistance resource in Army officer cadets. The U.S. Military Academy at West Point places officer cadets in a world of extreme mental and physical challenges. This provides an excellent natural laboratory in which to study how people respond and adapt to highly stressful conditions. Previous research has shown that personality hardiness provides a protective advantage to those who have it. Also, studies with cadets show that in general female cadets report higher stress levels than male cadets across several domains. Given the recognized role of hardiness as a stress moderator, hardiness may be a more salient resiliency tool for females than it is for males. The present study tests this hypothesis, examining (within sex groups) the relation of hardiness to health and leader

performance, as well as how hardiness may function as a stress moderator. A survey instrument was used to assess hardiness, symptoms, illness behaviors, and perceived stress/demands in N=187 students. Early results show that hardiness predicts symptoms, but not illness behaviors. Female cadets (N=37) are significantly higher in hardiness than males (N=150), although females also report more health problems than males. Females also perceive performance requirements across several domains as more demanding. Multivariate analyses within sex groups will determine if higher hardiness levels among female cadets is related to better health and performance as leaders under stressful conditions. Implications for officer development and training are discussed.

Katerina Bernardova

PURPOSE, OBJECTIVES AND GOALS OF THE FIELD MILITARY PSYCHOLOGY OF THE ARMY OF THE CZECH REPUBLIC.

The Psychological Service of the Army of the Czech Republic was established as a jointly coordinated and methodologically directed system dedicated to improve the quality of care of the human potential in the Czech Army, to improve the work of military psychologists, to increase the mental preparedness of soldiers, to support the care of mental health of the people in the resort of defence and to guarantee the compatibility of psychological services of the Army of the Czech Republic with those of other NATO allies.

Field military psychology, one of the three subsystems of this service, is professionally and methodologically directed from the General Staff of the Army of the Czech Republic. It also offers wide range of psychological services for the army people in the field.

Besides psychodiagnostics, counseling, psychotherapy (mainly crisis intervention), lecturing, creating conceptions and projects, field military psychology is also focused on surveys of psychosocial conditions of soldiers in peacekeeping missions as well as within the army itself. Tasks stated above obligate Czech field military psychologists to work hard to achieve the level of quality that the Psychological Service ACR requires. They also must be able to "accompany the client where he/she needs them".

Katerina Bernardova

Josef Falar

Barbora Palonova

Daniel Strobl

PSYCHOSOCIAL SITUATION OF THE SOLDIERS IN THE CZECH SFOR UNIT.

This presentation concerns results of the survey evaluating the psychosocial conditions of soldiers in the Czech SFOR unit, commissioned by the Chief of Staff ACR. Data for this survey were collected in three phases: (I) during the final period of pre-mission training shortly before the beginning of the mission, (II) during the mission, approximately in the middle of the six-months deployment duration, and (III) shortly before the mission ended. The longitudinal

character of the survey allowed comparing the survey outcomes of all of the three parts and monitoring dynamic processes in the psychological conditions of soldiers. The results of this survey indicate that Czech SFOR soldiers are in a very good mental health. They have a great ability to communicate with local people since they understand their specific traditions and customs, as well as with soldiers of other NATO allies located in the area. The mutual co-operation is rated as very good. Interpersonal relations within the unit are developed to different levels. Whereas the horizontal relations and communication among soldier of the same rank are regarded as very good and soldiers form a cohesive group, the vertical relations and the level of communication between soldiers and officers in command of the SFOR battalion are assessed less favorably. The survey also detected significant deficiencies in logistic provision of the battalion. In spite of these considerable challenges, the Czech soldiers operate at a very high quality level, which contributes to the overall good representation of the Army of the Czech Republic.

Kateřina Bernardova

Josef Falar

Barbora Palanova

Daniel Strobl

PROCES AND DYNAMICS OF THE PSYCHOSOCIAL CONDITIONS OF MEMBERS OF THE MISSION KFOR DURING THEIR DEPLOYMENT.

The typical mission KFOR lasts for six months. Before the actual deployment, soldiers attend one month long pre-mission training. For the purpose of our research, the whole mission is divided in three parts:

Before the mission

During the deployment

Shortly before the mission completion

During each of these periods, interpersonal relationships among members of the whole unit or in little groups within the unit, factors that affect mental conditions of each individual such as level of satisfaction of the basic human needs, sources of stress, and relationship with family, as well as actual mental conditions are observed. By summarising and comparing all of this data, a detailed picture of psychosocial conditions of the soldiers participating at the peacekeeping mission in Kosovo is obtained. In addition, these results also make possible to answer the question what the deployment in the mission means for Czech soldiers and reveal potential areas of further improvement of the conditions of their deployment in Kosovo.

Katerina Bernardova
Zuzana Pidrmanova
Gabriela Zackova

HUMANITARIAN ACTIVITIES OF THE CENTER OF ADVANCED SOCIAL STUDIES OF THE CHIEF OF THE GENERAL STAFF OF THE ARMY OF THE CZECH REPUBLIC IN THE AREAS AFFECTED BY WAR.

The efforts of the Center of Advanced Social Studies (CASS CGS ACR) are focused on the expert activity and counseling for the Chief of the General Staff and the people in command of the Army of the Czech Republic. The work has distinct field character. Experts employed in CASS spend most of their working time in the field with troops. They survey their psychosocial situation, and perform psychodiagnostics, psychological counseling and lecturing.

Within this framework, surveys of psychosocial situation of soldiers in the Czech SFOR and KFOR units were conducted. Eye-to-eye encounter with the consequences of war did not leave CASS people negligent. They realized that they could not only watch the helplessness of the local people in the land destroyed by war and felt the need to do something for them. This was the first impulse to start organizing humanitarian aid.

Since 1999, 4 humanitarian collections have been organized with the help of students of 9 elementary schools in Prague and with the strong support of public. Friendly contacts have been established with the Dzordz Natosevic School for children with special needs in Priedor. The highlight of all humanitarian activities was the patronage exerted over this school by the Chief of Staff gen. Jiří Šedivý.

CASS supervises collections of humanitarian aid as well as helps with both the delivery to the designated location and handing out to children. CASS people are ready to face the consequences of the crisis in the former Yugoslavia.

Jiri Brancik
Military Hospital Brno, Czech Republic

PSYCHOLOGIST IN A FOREIGN PEACEKEEPING MISSION.

A psychologist, as a member of foreign peacekeeping mission, contributes to sustain of a good quality of mental health of all soldiers of a troop. He does not solve only personal problems, which arise from a long time separation from family background; he helps to remove communication barriers between soldiers and the commanders if any occur. In the case some soldiers are exposed to the life dangerous situations, the psychologist, using a prompt intervention, prevents or inhibits possible consequences of posttraumatic stress disease. He cooperates with the chaplain of the troop; the fields of their leverage are common in many points. Using gained experiences the psychologist offers improving of a preparation for the foreign mission.

Emil Bolek
Kveta Dvorakova
Josef Falar

MONITORING OF DRUG ABUSE AMONG CONSCRIPTS OF CZECH ARMED FORCES.

The following contribution is designated to the first thematic area (the recruitment problems as well as social policy in order to sustain and develop human resources in the Army).

The main objective of the project presented by CASRI (Sports Research Institute of Czech Armed Forces) is to monitor drug abuse and social pathologic disorders of conscripts in the designated recruitment periods. The results are submitted to the highest levels of the Czech Armed Forces command as well as to the army branches and training units.

During the last year, there were diagnosed 6.522 conscripts in the fourteen training battalions of the Czech Armed Forces. A group of conscripts was compared to the overall number of examined persons from a period 1996-2000. This sample presents 61 029 persons and consists of children, youth, recruits and conscripts. The overall results highlighted inclinations to socially tolerable drugs (tobacco and alcohol) and intolerable drugs. It also pointed out a wide scale of lifestyle conditions that are related to social pathologic disorders.

Another part of the research that started in 1996 was focused on the comparison of the monitored group of conscripts with different groups of the Czech population.

Patrick Boss
University of Zurich, Dept. of Applied Psychology .

THE SWISS ARMY OUTDOOR ASSESSMENT CENTER FOR THE SELECTION OF FUTURE OFFICERS

In the new "Swiss Army XXI" the decision-making process for admission to military leadership schools will be supported by a detailed leadership-related aptitude clarification. In the new army, after six weeks of military basic training, soldiers with leader potential will be separated out and placed in a military leadership school. Commanders will have three sources of information to support their choice of officer candidates:

- 1) results from recruitment (intelligence and some leadership-related aspects and personality),
- 2) observations during military basic training by professional officers, and
- 3) results from an outdoor assessment center and a logical intellectual power test.

The new Swiss Army Outdoor Assessment Center is similar to a traditional Assessment Center. Main differences are the military-related contents of the exercises. Furthermore it has to be a challenge and an impressive experience to the aspirants.

Milan Brichcin

Jiri Klose

*Central Military Hospital Prague,
Department of Psychology*

STRESS DIAGNOSTIC OF COGNITIVE OPERATIONS.

In the paper authors refer about new developed psychological method which is used in psychological assessment of military specialists in the Army of the Czech Republic. Statistical data about the method and norms for individual categories in which the test sensitively distinguish (for example military drivers, military guards, members of foreign missions) are shown. The test is modern, constructed as a tool which gives results in complex. It measures both the level of the efficiency of cognitive operations under stress conditions and also make possible to obtain some information about selected personality characteristics - for example motivation, self-regulation, the strategy of solution procedures. Statistic correlation to intellect and to some selected clinical factors (for example neurotological symptoms) are also shown. The test is constructed as a visual searching CAT with the changing organization of experimental conditions.

Dana Cernochova

Jiri Klose

Pavel Kral

*Central Military Hospital Prague,
Department of Psychology*

THE PSYCHOLOGICAL SELECTION SYSTEM IN THE ARMY OF THE CZECH REPUBLIC.

The psychological selection system provided in the ACR is described. There is assessed about 10.000 people yearly in the selection centers. These centers are located in military hospitals and so Military Health Service Department of the General Staff is main guarantee of this process in the ACR. The main areas of assessment are described. There are especially cognitive capability, personality, psychic efficiency under stress conditions, normality-abnormality score, clinical interview. All selections are made by CAT system, the software is created by military specialists.

Antonio B. da Costa*

Fernando Fradique **

Aurelio V. M. Pamplona***

**Instituto Superior de Ciências Policiais e Segurança Interna, Portugal*

***Faculdade de Psicologia e de Ciências de Educação, University of Lisbon, Portugal*

****Ex-Director Centro de Psicologia Aplicada do Exército, Portugal*

A PERSONAL OVER VIEW OF 10 YEARS ON IAMPS: RETROSPECTIVE AND PROSPECTIVE.

One could suppose that the participation on IAMPS of an increasing number of military and civilian psychologists, with responsibilities and functions so variegated, and representing an also increasing number of nations, would be reflected by socio-academic presentations focusing more on theory than on practice, possibly disconnected from real situations related to problems and difficulties found in each country. This was not what we were confronted with since we started our collaboration in these encounters, in 1991.

Although there are technical differences in the works presented, they have emphasized a socio-professional component and different personal views from colleagues performing similar activities in the Military Psychology domain.

A content analysis on papers presented allow us to take knowledge with the specific concerns of each author, and give us cues to develop, in a mended way, new techniques and intervention models, fitted to the needs of each country.

Based upon the works presented at IAMPS for the last ten years, we present our interpretations of the main themes presented, underlining their historical importance for both military and general psychology developments.

Tomislav Filjak

Zelimir Pavlina

Anto Zelic

Ministry of Defence of Republic of Croatia

PSYCHOLOGICAL PRPARATION AND SURVEY OF PSYCHOLOGICAL CONDITION OF CROATIAN PARTICIPANTS IN UN MISSIONS.

In latter half of 1999 Croatian Armed Forces were for the first time presented the request for participation in UN peace mission. For the sake of psychological preparation and participants' condition survey, an outline of factors affecting psychological readiness in the missions of the kind was developed. The outline was based on insight into relevant reference available and Croatian experience as host of UN peace missions since 1992.

The outline comprises 3 groups of mission features (mission goals, operation type, conditions), possible consequences during the mission itself and after. It is intended to facilitate understanding of all factors affecting the readiness of soldiers during the mission and of their effects.

The outline has a training purpose, primarily for international missions participants. It actually served as basis of a questionnaire on expectations related to the mission and a questionnaire of assessment of factors' post-mission impact.

Both the survey and the questionnaires are elaborated in the paper.

Jaroslav Flegr***

Jan Havlicek ***

Jiri Klose**

Marek Preiss*

*** *Department of Parasitology, Faculty of Science, Charles University, Viničná 7, 128 44 Prague, Czech Republic*

** *Prague Central Military Hospital, U vojenské nemocnice 1200, Praha 6, 169 00, Czech Republic*

* *Prague Psychiatric Center, Ústavní 91, Praha 8-Bohnice, 181 00, Czech Republic*

INFLUENCE OF LATENT "ASYMPTOMATIC" TOXOPLASMOSIS ON SOME PERSONALITY AND PERFORMANCE PARAMETERS ON CONSCRIPTS.

Toxoplasma gondii is known to induce specific behavioral changes in its intermediate hosts. Prevalence of latent toxoplasmosis in most countries varies between 20-80 percent. Recently published data suggest that personality profiles of Toxoplasma-positive and Toxoplasma-negative subjects differ in specific ways. In this double blind study we search for symptoms of deterioration of mental health of infected people in large sample of conscripts (N=975). Subject were tested by Cloninger's Temperament and Character Inventory (TCI, Cloninger et al., 1994), verbal and visual intelligence tests and by other methods. We discuss the influence for mental health of conscripts and further research. The results suggest that the latent toxoplasmosis could in fact be a serious and underestimated medical problem.

Sanja Bender-Horvat

Suzana Stefan

Goran Tislarić

Ministry of Defence of the Republic of Croatia

COMMISSIONED AND NON-COMMISSIONED OFFICERS' ATTITUDES ON WOMEN IN THE MILITARY.

The militaries that have integrated women too proved their decision right at times when they were in war. Some of them opened their door to women in the last century. Croatia's Homeland War experience is another example of women volunteering to contribute to defence and not expecting privileges. Women defenders accounted for some 4,5 % total manpower at the time, of the age ranging 19 -77, and 51 were killed (mostly as infantry unit members). According to rather recent data of the Personnel Division of the Ministry of Defence (2001), women presently constitute 13,9 % of AF manpower in Croatia. Wide-scale changes and globalisation going on allow to anticipate altered the "traditional" role of the military, visible also in changed policy of admission of women. Most NATO member countries open more and more organisation bullets to women. We hope, therefore, that Croatian experience would make a valuable contribution towards the women integration issue.

Vehement social and technological development will engage more and more skills and knowledge, and therefore male and female potential. This could however be interfered by the

gender prejudices, or in other words social myths that lack scientific grounds, that could cause unnecessary interpersonal conflicts.

In 1997 an opinion poll on women in the military was conducted in the Croatian Armed Forces. There were 404 commissioned and non-commissioned officers as respondents. The questionnaire used comprised 36 statements concerning differences between men's and women's military performance. The statements were formed to cover 6 aspects critical for military functioning (motivation, togetherness/cohesion, discipline, courage, efficiency and working and living conditions in the military).

The results of a segment of the study are presented in the paper. Individual statements are reported reflecting favorable versus negative attitude towards women in the military. Differences were found also between attitudes of commissioned versus non-commissioned officers on the subject.

The results were then compared other research available on this issue in other militaries (e.g. studies conducted on US ships, military academies and field operations, studies run in the Canadian forces etc), that revealed similarities in the respective findings.

Barbara Jacobi

Institute of Military Psychology

Royal Danish Defence College, Denmark

BEING A SOLDIER IN THE DANISH INTERNATIONAL BRIGADE.

The Danish International Brigade was established in 1994 by the Danish armed forces. The brigade was planned to be at disposal of NATO as the Danish contribution to the Rapid Reaction Forces, as well as to participate in peacekeeping operations for UN and OSCE. Approx. 80 % of the brigade consist of reserve personnel, hired on a readiness contract, while 20 % consist of service personnel.

The Inst. of Military Psychology/Royal Danish Defence College, has followed a group of soldiers of the Brigade through a longitudinal study, the purpose of which has been to evaluate the soldier's experiences of participating in the peacekeeping operations in the former Yugoslavia as well as their experience of being on a readiness contract.

The study shows, that a future task for the individual regiments is to strong then the soldiers' attachment to the Forces in the period when they are not called up in mission, through education, information and motivating activities. The study also points to the fact that the soldiers have signed up for a variety of reasons. They are driven by different motivations and have different requests when it comes to considerations about re-signing their contract. Therefore, an analysis of the different groups of soldiers was required, focusing on their different motivations and needs, and what respectively encourage and discourage them to re-sign their contract. The analysis is intended to aid the search for recruitment and retention strategies, as an answer to the increasing problem of attracting sufficient numbers of personnel!!!!

Petr Jandejsek

The stress Research Center of Military University Vyskov

PSYOP AS A CHALLENGE FOR MILITARY OPERATION IN THE 21ST CENTURY

The realm of psychological operations (abbreviated PSYOP) belongs to the hot worldwide military tasks and it is urgent for the 21st century military strategy. Basically, PSYOP is a tool in the hands of a commander for the objectives of an operation to be successfully achieved. It is one of the support elements or force multipliers. The more weapon systems and technical equipment are sophisticated, the more psychological and communicative capabilities should be enhanced. According to the NATO policy we understand PSYOP as planned psychological activities directed to the target audience (individual or group) in order to influence attitudes and behavior. They mostly bear the form of informing and persuading. PSYOP may be provided in all stages of an operation. The growing interest in its implementation into military operations discloses the desire to avoid blood shedding and to solve controversies by arrangement.

The PSYOP element is present in both main theatres: SFOR and KFOR, and most of NATO nations acknowledge its significance. Also the Czech Republic as a new NATO member is building a PSYOP structure and the Stress Research Center of the Military University Vyskov plays an important role. We focus on the research in communication, culture and psychosocial aspects, as they are relevant for PSYOP. Our new project we prepare for this year is focused on the criteria and methodology for selection of PSYOP personnel.

Hans Jetten

Royal Netherlands Army, Behavioural Sciences Department

Personnel & Organisation Service

The Netherlands

PRESSURE OF DEPLOYMENT AND TURNOVER AMONG MILITARY PERSONNEL

With the use of PRISMA, our instrument to monitor the opinion of the personnel, we've asked during 2000 a large number of military personnel their opinion about the pressure of deployment. The primary purpose was to measure the perceived pressure was rising among certain groups of military personnel. Because the questionnaire (PRISMA) contains several other questions about work related subjects (i.e. work satisfaction, intention to leave, motivation), we could analyse the relationship of the pressure of deployment had several (large) effects on the other behavioural variables, for example retention.

Pavel Kral
Vlastimil Tichy
Central Military Hospital
Prague, Czech republic

PREPARING ORGANISATION OF ACUTE CRISE INTERVENTION AT DISASTER IN CZECH REPUBLIC.

This paper is writing preparing organisation of acute crise intervention at disaster in Czech republic in frame project of Europe Union LEONARDO. At the first part is showing theory of acute crise intervention at disaster, at the second part is writing its contemporary state in Czech republic.

Francois Lescreve
Project Officer for Recruiting
Belgian Armed Forces – Defense Staff – Personnel Division

USING SMART CLASSIFICATION TECHNOLOGY TO IMPROVE MILITARY RECRUIT QUALITY

For a number of reasons that will not be addressed in this paper, it appears that it becomes increasingly difficult for many Armed Forces to achieve recruitment goals. In situations where the number of applicants isn't large enough to fill all vacancies with persons who meet all selection criteria, the pressure increases to lower enlistment standards.

In comparison to most selection situations for civilian employment opportunities, the military recruiting can be characterized as a multiple-job environment. For this variety of vacancies, applicants clearly have preferences. In most cases however, they are willing to accept more than just one particular job. In recognizing the fact that the requirements for the various jobs are different and that the group of applicants contains a variety of differential aptitudes, it becomes possible to capitalize upon the matching of persons and jobs. Doing so with smart batch classification methodology, allows demonstrating improved recruit quality compared to more classic allocation methods.

This paper will analyze the benefits of sophisticated batch classification methods in Military recruitment settings and will show some actual examples.

Luc Leveille

*Operational Effectiveness and Leadership Section,
Directorate of Human Resource Research and Evaluation,
National Defence Headquarters, Ottawa, Canada*

THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND PERSONALITY FACTORS IN ARMY UNIT

Canadian Forces leaders have to possess special leadership attributes in order to lead with efficiency their troops in the context of CF operations. This has become an issue as CF members are increasingly involved in conflict resolution operations and where tasks are complex and the degree of unpredictability is high. This paper addresses the relationship between leadership styles and personality factors in army unit, using the Multifactor Leadership Questionnaire (MLQ 5X) (Bass&Avolio, 1995) and the Trait-Self Descriptive Inventory (T-SD) (Christal, 1994). Results are discussed in terms related to the operational effectiveness domain, specifically as an introduction toward a model of team effectiveness.

Merete Lindholm

*Institute of Military Psychology
Royal Danish Defence College*

RE-INTERVIEWS OF MILITARY STUDENTS WHO BREAK OFF THEIR EDUCATION AND TRAINING TOO SOON.

AIM: Gather information about the decision of breaking off in order to improve the selection, the teaching and training of personnel and to ensure the well-being of the military student.

OBJECTIVE:

- a) Evaluate the selection of the military student mentioned as well as the selection procedure in general
- b) Evaluate the part of the teaching and training programme in which the military student participated

Ensure the well-being of the military student and advice him or her if necessary

RESULTS:

The re-interview is conducted by one of the consultant psychologists who perform the selection interview. Once a year the institute of the specific military education is given an oral orientation in which the individual military students opinion is made anonymous. Once a year the Defence Headquarter is given a written orientation incl. statistics with the main conclusion and recommendations.

CONCLUSIONS:

Re-interviews are helpful for improving the selection of future personnel in general and as feedback to the individual consultant psychologist who performed the selection interview. Re-interviews are very helpful for the different institutes of military education in evaluating and improving their teaching and training. Re-interviews are extremely important for the well-being

of a few military students and the great majority of the students show a very positive attitude to the demand of participating in a re-interview.

S.A.Lytaev

Military Medical Academy, St.Petersburg, Russia

PHENOMENON "AUGMENTATION-REDUCTION" DURING PERSONNEL SELECTION

Early in the 60s there was described a kinesthetic psychological phenomenon, named augmentation/reduction. In such situations some examinees mostly tended to augment virtual weight of an object, and others - to reduce. The former were named "augmentors", and the latter "reducers" accordingly. Later on the said phenomenon was further developed in respect of other sensory modalities.

We estimated the role of emotional processes in regulation of the structural afferentation of varying contrast by means of visual evoked potentials (VEPs) recording, investigations of Cattell factors and behavioral data from naval cadets during professional selection.

The first type of VEPs responses was characterized by direct relationship between contrast and VEPs amplitude (augmentation). In second case, initially there was VEPs amplitude increase, but later on the relationship became the reverse one, manifested by marked decrease of the amplitude (reduction). The amplitude of wave N70 VEPs in all the subjects and that of wave N150 in subjects with the high stress characteristics (factors C and Q4) were in a direct ratio with the contrast of the stimuli. For the persons with the low stress characteristics an inverse ratio (wave N150) was observed in the occipital-parietal sites while in the frontal areas a switching-over control mechanism was manifested. Comparison of behavioral investigation results with VEPs data enabled to find that the first variant of reaction of subjects was characterized by lower degree of visual images identification, under conditions hampering their identification, irrespective the modality of test objects.

Dennis McBride*

James Patrey, MSC, USN; **

Dylan Schmorow, MSC, USN;***

Laura Worcester ****

**Krasnow Institute – George Mason University*

*** United States Air Force Academy*

****Office of Naval Research*

*****Potomac Institute for Policy Studies*

AUGMENTED COGNITION: NEW DESIGN PRINCIPLES FOR HUMAN-COMPUTER SYMBIOSIS.

The goal of the DARPA Augmented Cognition program is to extend, by an order of magnitude or more, the information management capacity of the human-computer war fighting integral by developing and demonstrating quantifiable enhancements to human cognitive ability in diverse,

stressful, operational environments. Specifically, this program is empowering one human's ability to successfully accomplish the functions currently carried out by three or more individuals. A key objective of the program is to foster development of novel- and improvement of identifiable- prototypes and enabling technologies, in order to experiment with and understand the means by which they may be integrated into existing operational systems, as well as those in development. The program will accomplish this by delivering new design principles for human-computer symbiosis.

The Augmented Cognition program will explore the interaction of cognitive, perceptual, neurological, and digital domains to develop improved performance application concepts. The advanced applications will be tailored to military problems in order to demonstrate potential pay-off for operational users. Success will improve the way 21st Century warriors interact with computer based systems, advance systems design methodologies, and fundamentally revolutionize military decision making.

Perhaps most important among the enabling breakthroughs are (1) the abundance of laboratory results which are accruing from the cognitive revolution and, (2) the results of research on brain mechanisms based on functional Magnetic Resonance Imaging (fMRI) technology. This revolution in human information capacity is further enabled by continued gains in speed and memory growth in digital technologies that blend virtual representations across perceptual modalities.

Jacques Mylle

*Department of Psychology
Military Academy
Brussels – Belgium*

PERCEIVED TEAM EFFICACY IN PEACE SUPPORT OPERATIONS

A lot of tasks during peace support operations (PSO) have to be performed by small military units (say from 4 to 10 people). These tasks are characterised by the necessity of teamwork and a high level of autonomy due to the large distances between the (sub)unit executing a task and their superior.

Together with a colleague of the Catholic University of Leuven, we are conducting a study aiming at measuring the team efficacy in PSO as perceived by the members of the team deployed. This study is intended both as a longitudinal study measuring the perceived efficacy before, during and at the end of the mission and a cross-sectional study allowing comparisons between several types of units deployed. A questionnaire has been elaborated for that purpose measuring several facets of team functioning; e.g. degree of autonomy in decision making or internal communication. Furthermore, the same questionnaire has been submitted to teams of several civilian enterprises allowing for a comparison between the civilian and the military world.

Data concerning "before deployment" have been collected after an intense training period, 14 days before deployment in a sample of about 200 soldiers out of a 800 belonging to the task force Belukos VI, which will be deployed from the beginning of April until the beginning of August.

In this paper we describe the questionnaire, the population; and first cross-sectional results will be presented too.

Alavaro Oliveira
Portugal

THE METHODS USED, ACTUAL APPLICATION AND PERSPECTIVE WILL BE PRESENTED AND DISCUSSED. ESTUDO DAS MOTIVACOES DOS JOVENS PARA INGRESSO NO REGIME RV/RC.

In this study we pretend to analysis the young people motivations to apply to volunteer and contract situations. It was applied nationwide (continent and island) to assessment the attractiveness and competitiveness that this volunteer and contract situations have employer organization.

The sample's universe was composed by young who attend the school system - 9th - 12th or similar and by young people who are already working. About the methodological instruments of analysis and information captation, it was built a representative sample of the universe that was analysed by qualitative techniques (exploratory interviews as deepening interviews) and quantitative techniques (inquiry) in a logic of complementarily. At the present moment, all the phases that compose this work are concluded, being expected to November 2001 the presentation of the final document with all the conclusions.

James Patrey, USN
LCDR Dylan Schmorow, USN
United States Air Force Academy
Office of Naval Research

JOB SATISFACTION OF MILITARY FACULTY AT A U.S. SERVICE ACADEMY.

The United States military is constantly challenged to retain the highest quality personnel. In the "Knowledge Warrior" environment of the future, service academy military faculty gain greater significance as officers with advanced degrees and educators of tomorrow's forces. Improving our understanding of how to maintain and improve the quality of work for our educated forces is imperative to the operational environment of tomorrow.

Faculty at the United States Air Force Academy (USAFA) voluntarily completed an organizational climate survey as part of regular assessment practices. Archival data from the spring semester 2000 of 293 officers (O1 to O6) teaching at USAFA were used to develop a post-hoc model of job satisfaction for military faculty. A cursory predictive model of job satisfaction was constructed using gender, instructional position, satisfaction with communication/information transfer, perceived quality of support services, dispensation of recognition/awards, and supervisor quality ratings. A backward elimination linear regression revealed that the quality of communication, recognition, and supervisor interactions were significantly related to job satisfaction. Furthermore, communication, recognition, and supervisor quality were also significantly related to thoughts of/intentions to transfer.

These results suggest that the military should continue to focus on developing leadership and management skills in the service academy environment and the military at large. Improving supervisors' abilities to interact with, communicate with, and provide formal recognition to supervisors may facilitate retention of our best officers and help maintain operational readiness.

James Patrey, MSC, USN; *

Dylan Schmorrow, MSC, USN; **

Laura Worcester ***

* *United States Air Force Academy*

** *Office of Naval Research*

*** *Potomac Institute for Policy Studies*

VIRTUAL COMBAT TRAINING SIMULATORS FOR URBAN CONFLICTS AND PERFORMANCE TESTING.

Advances in technology are enhancing our ability to create realistic Virtual Environments (VEs) in which Sailors and Marines can train skills that are too costly, dangerous or otherwise impossible to practice. These capabilities will become even more important in the future as budgets and time for training decrease. Science and Technology in this area will help to leverage and extend virtual technologies so that the Navy is optimizing their use in training.

This ONR effort is demonstrating the power and effectiveness of applying Virtual Technologies and Environments (VIRTE) to training. It focuses on developing two basic elements of VE training technology: (1) improving the quality of interaction provided by VE, and (2) applying advanced training aids and methodologies. Advanced training aids and methodologies are being developed to derive full benefit from the flexible new medium of VE. VIRTE is developing, demonstrating and transitioning virtual and augmented technologies for training supplementing and complementing live combat training. Additionally, VIRTE provides a compendium of technologies focusing on the human perpetual and cognitive functions in a virtual environment to simulate human natural direct interaction.

VIRTE prepares warriors and teams to win in direct contact with the enemy by training in battle skills, tactics, techniques, and procedures. VIRTE provides realistic combat simulators and focuses on Navy and Marine Corps warriors and small teams (the Human System rather than the weapons system or platform) to increase performance in skills that are too dangerous, costly, or otherwise difficult to train in.

Eva Pavlikova

Research Dept. of Ministry of Defence, Prague

SOCIAL-PATHOLOGICAL PHENOMENONS IN CZECH ARMED FORCES AND THE CZECH SOCIETY.

During the last years the Research Department of MOD surveys the attitudes of soldiers (professionals or conscripts) and the Czech public towards foreigners and minorities (especially

focusing on the relationship with Roma population), towards drugs, alcohol and the other dependencies. In this paper we intend to present some of the results from these surveys. We will try to find the answers to these questions: What are actual problems of the Czech military and society from the point of view of regular soldiers and civilians? Are there any differences between society and the military? Who is more xenophobic - civilians or soldiers? What are the main characteristic features of the soldiers (both professionals and conscripts) who show some racist attitudes and opinions? Does alcohol and drug abuse represent a problem to the Czech military? How the soldiers (professionals/commanders/conscripts) react to the drug abuse? Are they concerned with it? Are commanders able to cope with the problems of drug abuse? How many soldiers has met with bullying? What are the main reasons of bullying among conscripts?

Gheorghe D. Pertea

Silvia Isari

Romania

Ministry of National Defense

Department for Military Psychology

TEST-CORRELATES OF SUCCESS OF THE ROMANIAN MILITARY PERSONNEL PARTICIPATING IN AN INTENSIVE TRAINING EXERCISE FOR SPECIAL FORCES CONDUCTED IN ENGLISH

A complex approach of the qualified physical, psychical and personality qualities was applied to candidate selection and to establishment of the predictive validity for the test series which has been used to provide success of the military selected personnel (non-commissioned and commissioned officers of age younger than 30) who participated in the intensive training exercise for special forces conducted in English.

The results of a peer rating applied in six size groups in the end of the two week intensive training exercise have been used as criterion-indicator. A total of 54 selected military trainees were evaluated by these tests before the exercise and by the peer rating procedure after it. Out of 19 tests applied in selection, which provided 39 test-indicators, according to linear, simple and multiple correlation with established criterion, 9 test-correlates have been validated (2 belong with the physical training tests, 6 belong with the psychological tests and 1 belongs with the level of writing and speaking English skills).

The multiple correlation coefficient R between the predictor information and criterion data was of 0.82 ($p=.001$) and determination coefficient R^2 was of 0.65.

Having established multiple regression equation terms we may compute the global predictive indicator related to the success of the tested military candidates for similar intensive training exercise for Special Forces conducted in English.

In conclusion, the selection of the young military personnel for similar intensive special training will be more efficient, if we use a complete range of test-procedures covering the main categories of physical, mental and personality qualities that are really required within the intensive, special, military training course.

The predictive value of the initial selection test battery will increase when, as a result of the validity study, we select, only the tests and test-indicators having the coefficients with high significance and which becomes more informative concerning the established selection purpose.

Murray W. Rowe

Navy Personnel Research, Studies, and Technology (NPRST)

BATTLING U.S. NAVY ATTRITION THROUGH SCIENCE AND TECHNOLOGY

Today, 4 of 10 recruits who enter the United States Navy do not complete their initial service contract. Half attrite during "boot camp" and another half leave during skill training or while in Fleet assignments. This attrition has placed tremendous stress on the recruiting mission and results in fewer Sailors reenlisting for additional service. NPRST is conducting a comprehensive R&D program to address and reduce attrition. This paper describes the efforts to understand attrition through person-organizational "fit" measures and to develop of a new enlisted selection and classification system known as "Whole Person Assessment".

Helmut Slop

Austrian International Peace Support Command

DEPLOYMENT OF PSYCHOLOGY WITHIN THE AUSTRIAN INTERNATIONAL PEACE SUPPORT COMMAND.

This contribution will present the psychological measures before, during and after peace support missions of the Austrian Armed Forces.

Pro-mission measures

- Psychological leadership-training for commanders (position-leaders to battalion-CO)
- Psychological pre-mission preparation for other personnel
- Psychological selection

Measures during the mission

- Psychological support and care-giving
- Psychological family support

Post-mission measures

- Feedback through after-deployment questionnaire
- Evaluation of lessons learned for application in pre-mission training

Mladen Trlek

Ministry of Defence of the Republic of Croatia

RISK FACTORS AND DISCIPLINE VIOLATION

Discipline violation by military personnel in units or in the after hours constitutes a specific problem for the military, that in addition to having direct consequences on AF members or civilians (such as death, disability, material damage etc.), can also affect the community's attitude on the military and its members.

The paper discusses discipline violation (severe instances) in a unit over a 5-year period, through the basic assumption on a relation between severe discipline violation and risk factors amplifying the maladaptive behaviours repertoire of individual members of the military. Individuals violating the discipline severely were found to differ from the overall sample in age, marital status and educational level. With the respect to the control group significant differences found consisted in life experiences until the age of 16 (parents' death or separation, psychiatric or alcoholism treatment).

Wolfgang Weber

CRITICAL INCIDENT STRESS MANAGEMENT IN THE BUNDESWEHR.

Beginning with the participation of UN-missions the Bundeswehr developed an interdisciplinary support system to guide and support the individual soldier, their superiors and leaders, and the organizations in stress prevention programs and coping procedures when experiencing critical incidents (accidents, shooting events, mine explosions, death and injury during duty etc.)

The paper shall give an overview on common principles i.e. critical incident stress management procedures and their implementation in a set of different decrees, orders, and special instructions to certify the quality, training, and effectiveness of such principles within the Forces. Examples of lessons learned and future plans were given.

Beatrice van Zevenbergen-Snel

Royal Netherlands Army

Behavioural Sciences Department

Personnel & Organisation Service, The Netherlands

DEVELOPMENTS IN COLLECTING MANAGEMENT INFORMATION

In 1997 the RNLA started PRISMA, the instrument to monitor the opinion of both personnel and Dutch population about the Netherlands army. In Dutch, PRISMA is an acronym for Periodic Reporting Image, Satisfaction and Social Acceptance. Both military and civilian personnel are questioned about their satisfaction, motivation, commitment and retention. The Dutch population is structurally asked about the image of the Dutch army and the appraisal of its tasks. Besides these questions which are daily asked, the instrument offers the opportunity to ask extra

questions about topics of current interest. For example, in 2000 military personnel were asked about experienced pressure of deployment.

Since PRISMA started four years ago, we have been working on improvements. We looked for new methods of collecting data. For instance, we now use an internet panel for interviewing the Dutch population. We also looked for better ways to communicate the results. We now report to commanders about the results of their units by e-mail. To inform other personnel (like human resource managers) we publish results in army periodicals. Besides that, we are working on a PRISMA-homepage for the intranet. This way, commanders and personnel can check the latest results whenever they want to.

Papers

(according to the programme of the symposium)

Fernando Fradique¹⁾, Aurélio V. M. Pamplona²⁾, António B. da Costa³⁾: Personal Overview of 10 Years on IAMPS: Retrospective and Perspective.

¹⁾Psychologist, Faculdade de Psicologia e de Ciências de Educação, Univ. of Lisbon, Portugal

²⁾Psychologist, Col., Ex-Director Centro de Psicologia Aplicada do Exército, Portugal

³⁾Psychologist, Maj., Instituto Superior de Ciências Policiais e Segurança Interna, Portugal

1. Introduction

In 1987 we had the fortunate opportunity of attending, for the first time, an International Applied Military Psychology Symposium- the 23th IAMPS- held in Lisbon.

Although one of us was at the time facing the end of his military career, having experienced some hard moments after 6 years of active and combating commissions in three different fronts, we were, like many other psychologists working at Portuguese Army Applied Psychology Center (CPAE), "fresh" psychologists, recently graduated by the University of Lisbon. Our minds were active in working on several different theories, but our "hands" did not have but a few of practical skills. We still remember all the difficulties we had to surpass, in order to present, to all the other participants, what we were doing as military psychologists, in the context of the Portuguese Army.

The CPAE's tasks were, at that time, not much diversified. They consisted, mainly, of the recruiting of soldiers in the context of SMO (compulsory military service), and the selection of candidates to the sergeant's and officer's ranks.

It is not surprising that, a few years later, we confronted our hierarchical superiors with the need for regular participation in subsequent IAMPSs, as a main requirement for the evolution of this field of psychology in the Portuguese Army. In fact, this is a privileged way for changing experiences and learnings, as well as a privileged context to share difficulties and needs. As a consequence of that action, a study on the selection of special forces was carried on and presented, in 1991, in the 27th IAMPS (Stokolm).

These meetings, paralleling the efforts we always dispended in trying to keep in touch with Portuguese Universities, they have, and have always had, a special importance and a special meaning related to our own personal development in the field of military psychology and to the development of that domain in Portugal. Why? That is what we will try to do now. Our presentation is no more than a brief report on our own testimony of 10 years of IAMPS.

2. Retrospective**a. Stockholm, Berlin, Cambridge (27^o to 29^o IAMPS; 1991-1993)**

Three different cities; three different countries; three different environments, with different morphologies, traditions, languages and people. Three different "sites" components of the "global village" the world is turning to be. In Stokolm, at the very same moment we started to cement our friendships, we started our apprenticeship.

The majority of the papers presented then can be classified as belonging to the first three main themes of this 37th IAMPS we are living today:

Recruitment and retention;

Individual and collective training; and
Situational and operational conditions, namely *stress* its effects on performance.

However, the studies presented revealed concerns over domains essential to good performance of the troops that exceeded, by far, the psychological interventions/actions realized in a country so shortened on resources and so weakened on research traditions as Portugal was then.

Some titles, randomly chosen, may clarify what we said above:

"Social Competence Requirements for Tank Selection" (Stockholm, 1991);

"Computer-Assisted Testing" (Berlin, 1992);

"Selecting for the Austrian Contingents on UN-Peace-Keeping-Missions" (Cambridge, 1993).

There is no doubt that these themes are of great importance for the countries that presented them and, possibly, for many others. In fact, they correspond to needs that have to be satisfied and whose resolution will be translated, respectively, in an improvement of social competence of tank commanders; in economical, time savings and psychological results reliability increase; and an increased quality of the contingents selected to those kind of missions.

Taking knowledge of this kind of works helped the Portuguese military psychologist to open several "doors", namely from active units and instructional centers, making possible psychological interventions in such areas as sensitization of hierarchy for the importance of psychological contribution to decrease some deficiencies, and redirection of attention to other needs of psychological services, such as adequate material and technical resources. As an anecdote, we still remember the fact that, some years ago, we were confronted with the idea that the army psychological services were to have their own computers only after all other military units (operational and non-operational ones) were contemplated with.

In spite of a concentration on the topics referred above, there was a wide range of topics and contents discussed on the 69 papers presented in these three occurrences of IAMPS (21-1991; 27-1992; 21-1993), mainly centralized on current concerns and studies and needs specific to each country. F. Steege (29th IAMPS, Berlin, 1992), in his presentation of "A Brief Historical Review", concerning IAMPS meetings from 1963 to 1992, classified the topics reported in 45 categories. We do not want to echo here his exhaustive and exemplary analysis, but we can not resist to quote his words, as they translate so clearly the state of mind lived during that meeting and constitute a landmark for us:

As we get closer to year 2000 "we may discern seven points of particular emphasis: (1) the problems of German military in 1992, as part of the German situations of integrating the former East and West German armed forces (2) The global situation, including the development and dangers of the newly emerging nationalism, and lessons from Gulf War; (3) the wide-spread need for force downsizing, and tasks of applied psychology in this respect, (4) stress and stress management in different facets, from combat to the learning situations in military academy, from basic cognitive research to applied leadership training; (5) personnel management and classification, and (7) field psychology".

All studies presented in these encounters merited our attention. Some of them, however, merited more attention than others. It is so given the similarities of contexts and difficulties experienced or that "may be experienced"; given their advanced technology; or because they addressed areas where we were not active or even aware of. From those, we pinpoint just a few, regardless of their technical value, which is not under appreciation here:

(1) In Stockholm: (a) "Suicide in the Irish Defence Forces: 1974-1990" (United Kingdom). The fact that the ratio of suicidal behaviors and depressive reactions among military population is greater when compared to civilian's, call our attention not only over recruitment and selection procedures, but also over the need for the development of a Mental Health Policy on Armed Forces, including Educational and Counseling programs; (b) "Officer Premature Voluntary Release (PVR) in the British Army". The displeasure of many career officers with their military life, demanding conditions for a greater satisfaction at work, career development and attention over all the areas that would be reflected on familial well-being, constitute a fresh new area for us to pay attention.

(2) In Berlin: (a) "Results and Perspectives of Nato Research Study Group 22 (AC 243/8 on Psychological Support for Military Personnel" (Germany) "The Psychological Fitness (PF = capability to withstand combat stress / maintenance and enhancement of performance in critical military tasks) had to be supplement by the approach on Psychological Support". That means that who can benefit from psychological support has all conditions to develop adaptation skills concerning news, unforeseen and threatening situations (such as flexibility) and coping skills in order to overcome problems and difficulties (their owns, and of comrade's), and the development of belief-value matrices, "which give an orientation of the position and situation in the world of values [...]". The following psychological support techniques for military personnel were pointed: self-aid (e.g., self-motivation, progressive relaxation of muscles after Jacobsen, systematic dessentization after Wolpe, autogeneous training after Schultz, mental training and breath regulation), buddy-aid (ventilation and guidelines for self-aid, and intervention by military leader); (b) "Military Manpower in an Era of Smaller Forces: Some Issues and Opportunities for Applied Psychology" (U.S. A.) [...] according to the author, "we need not view downsizing from a negative perspective, as a bad thing. Force restructuring does not mean decline. As our military forces get smaller, and as we help to redefine what they do and how they do it, they should get better. Downsizing can improve our ability to respond to the unexpected; it can enhance our productivity and it can lead to a more satisfied workforce. Force reduction will have profound implications for national priorities and relationships among allies, which, in the long run, should all of our lives and those of future generations"

(3) In Cambridge: (a) All presentations regarding the development or administration of tests or training packages, namely the use of virtual reality or of artificial intelligence - "The Psychometric Model: for the Selection and the Assignment of Belgian non Commissioned Officers"; "The use of Artificial Neural Networks with Small Samples of Selection and Classification Data" (United Kingdom); "Validation of a Set of Psychological Tests for the Selection of Highly Specialised Troops" (France); "Report on Latest Developments of German Federal Armed Forces Psychological Testing System"; "Selecting for the Austrian Contingents on UN-Peace-Keeping-Missions"; "Virtual Reality, An Instructional Medium for Visual-Spatial Tasks" (USA); e outros); (b) Harassment Research and Initiatives in the Canadian Forces", concerning prevention on the work site.

b. Heidelberg, Lisboa, Brussels (30th to 32th IAMPS; 1994-1996)

In all and each of these cities, the conditions were advantageous for the presentation of papers closely related to the needs and new missions of Armed Forces.

Compared to the previous period, the number of papers presented show a slight decrease (60; 21-1994; 18-1995; 21-1996). However, a significant number of papers presented may be included not in the three topics or areas already pointed out, but as addressing other main issues, namely: a) topic 4. - role of leadership changes in small conflicts, ...; b) topic 5. - gender & minority issues, ...; c) topic 8. - quality of life, deployment and pos-deployment identity, family care and counseling; and d) 10. - the present organization of applied psychology in response to new missions; and others.

Again randomly, let us look at some of the papers presented:

In Heidelberg: (a) several studies presented the development of new techniques and models on military training using simulation frameworks and presenting decisive implications on instructional financial expenses; (b) several studies cover and develop over the new roles played by military psychologists, namely regarding the attendance of the forces involved in external missions. The portuguese psychologist that attended this meeting summarized, in 15 items, the tasks a military psychologist may perform (Table I):

Table I .- Military Psychologists Tasks Performed when integrating Peace Missions

☐ selection of personel	☐ management of human ressources
☐ training for the mission	☐ crises interventions in traumatic situations
☐ stress management training	☐ control and support of soldiers making
☐ leadership counseling and group dynamics	prisoniers
☐ psychological counseling	☐ intervention in situations of terror and
☐ family support	sabotage
☐ stress prevention programs	☐ veteran reintegration
☐ security at the work site	☐ ptsd intervention

In Lisbon: (a) "Danish UN-Soldiers: Experience and Stress Reactions". Lessons learned - Selection of UN-soldiers can be improved, especially regarding the family situation and the social competence; cohesion in the primary military group is confirmed to be important in preventing stress reactions; support for the families should be given more attention; (b) "FSH (Leadership Support System) - The Implementation of a Feedback System for Unit Commanders" (Austria). By means a comparatively short and clearly arranged questionnaire the servicemen get the opportunity to state (on a rating scale) their opinion (as far as it can be expected of them regarding: leadership behavior of their commanders, morale and working climate within the unit, the way th unit is run, the trainig and the logist (food, quarters, equipment, supply). The information received by means of the FHS is reserved exclusively for the unit-commander.

In Brussels: (a) "Opening Address", Maj. General Derycker, Chief of the Belgian General Staff Personnel Division, given the changing geopolitical situation after the fall of Berlin wall, alerted us for the importance of psychologists contributions (Table II)

Quadro II .- Needs and challenges raised by strategic changings

Needs		Challenges
↗	military strctures adaptation	1. cope with stress
↗	selective downsizing;	↗ military and military families support

↗	bettering inter-armies relationships;	before, during and after missions
↗	attract and recruit voluntaries;	2. costs increases resultig from weapons development
↗	reduce executives;	↗ computer simulations, simulators and virtual reality;
↗	motivate personnel;	3. increase of information
↗	increase peace enforcing forces;	↗ information processing device, and device helping in decision making

(b) All the studies related with the evolution of general psychology. This area concerns not only mental health issues, but general health and adjustment issues resulting from psychological or phisiological tension and stress. Just as an exemple, we can underline the following papers: "Junior Leadership in Humanitarian and Peacekeeping Operations" (Netherlands); "USA - American IFOR Experience: Psychological Stressores in the Early Deployment Period. Stressores"; "A Health Psychology Approach or More than the Traditional Physician Can see: First Results in a Central Military Hospital" (Portugal)

c. Vienne, Paris, Florence, Split (33th to 36th IAMPS; 1997-2000)

Viena, Paris, Florence and Split !... the space and the time do not alow us to give a fair testimony of the emotion felt when we live, even for a few days, in those cultural and historical european jewels. Although we had been present in Florence, the fact that we did not receive the *proceedings* constrains our work.

The increasing interest developed by the several IAMPS, lead, surely, to an increase of creativity, as the number of papers presented has doubled when compared to the the previous events- more than 112 presentations (27- 1997; 36- 1998; ?- 1999; 49- 2000).

Considering the 12 issues proposed for this meeting (37th IAMPS), it can be noticed an increasing number of presentations concerning topics that one could hardly incorporate in the traditional categories refered above.

Our extreme difficulty in describing what impressed us the most is permanent. This is the reason why we will underline a couple of examples from each encounter:

In Viena: (a) "Development of Intercultural Competence for German Military Personnel". There is a urgent need for military personnel in peacekeeping missions to develop intercultural skills in order to avoid misunderstandings in the interaction with the groups and to respect unfamiliar ways of perception, thinking, judgement and behavior as well as the willingness and capability to negotiate even in the presence of danger, threat and aggression; (b) "The Effect of Screening Conscripts before Deployment in Peacekeeping Operations" (Netherlands). This study showed:

- The importance of screening before Deployment in Peacekeeping Operations;
- That the repatriated were usually younger and less well-educated than are the conscripts who do complete the term;
- That the repatriated also usually score lower on the "locus control" scale and higher on "psychopathology" than their colleagues who do complete their six-month term.

In Paris: (a) "Operational Tempo of Forward - Deployed Soldiers in Europe" (USA). It is important for some countries the workload on soldier. The workload on soldier is a way to measure the impact of the operational pace on soldiers and unit readiness. The authors postulate

an optimal level of operational pace which maximizes military response. This response decreases when the operational pace is too high or too low; (b) "Selection 2000" (Italy). The targets, main objectives, strategies and roles played by Armed Forces has changed, due to high technology and the importance given to Peacekeeping Forces. There is a need to choose the more adequate persons to carry on those missions – persons that have to be conscientious, assertive and globally prepared to accept all the possible relational variations that may turn a conflict into a harmony. In that sense, it is unavoidable the incorporation of women in the Armed Forces.

In Split: (a) "Organizational Commitment and Turnover Among Military Personnel" (Denmark). According to the author "[...] it seems important to embrace the new concept of strategic development of competencies, and thereby reach a balance between the values and the needs of the organization and the wishes for and needs of development from the personnel. By doing this, an appraisal and development dialogue tool will be an element of the struggle to attract and retain valuable personnel in the future. [...]". (b) "The Development of Psychology in Croatia and its Role in the Homeland War". The main tasks of the psychologists are (Table III):

Table III. - Military Psychologists Tasks

<ul style="list-style-type: none"> ☐ The evaluation of combat readiness and factors determining it; ☐ Interpersonal relations in military units and psychology of commanding behavior; ☐ Psychological preparation of soldiers of combat; ☐ Psychological selection and classification of military personnel; 	<ul style="list-style-type: none"> ☐ Psychological education for military purposes of rank-and file soldiers and commanding officer; ☐ Training of soldiers in practical skills; ☐ Psychological prevention and psychological support for person in distress; ☐ Psychological care, especially for the injured and families of the killed; and ☐ Promotion of activities.
---	--

The successful operations and actions are due to a few basic factors: The quality of basic psychological professional training; the direct engagement of psychologists in combat units; the creative potentials of military psychologists in very different fields of professional work; development of the new role military actions and missions will have in the 21 St century.

Final remarks and perspectives for the future

We would like to finish this presentation quoting William D. Crano, in 1988: "the information exchanged at IAMPS is truly valuable. [...] I have been immensely impressed with the quality and dedication of the IAMPS participants I have met [...], and can only hope that this wonderful tradition of science and positive interpersonal relationship continues to characterize this organization in the coming years".

It is a pity that so far it has not been possible to take for granted that all papers presented at the several IAMPS that took already place, as well as the results of so many empirical studies, are available for all military psychologists working around the world. A *Journal* or a *Newsletter* would be welcomed.

We all know that editing a Journal or a newsletter on Military Psychology is difficult and that all kind of psychologists can and should be in touch with what is new through the hundreds or even thousands of specialized publications in the market. The military psychologist, as any other kind of practicing psychologist is, and should be even more strongly, a scientist-practitioner, considering both the theoretical as the pragmatic developments in the field.

For us the papers presented in this last ten years were a guide of our reflection. So, we think, that an easy and cheap access to those proceedings is the creation of a site in the internet with all the papers presented in the IAMPS. Once again, as was suggested in other IAMPS, this could be the beginning of a future international association of Military Psychologist.

The military institution is changing and evaluating permanently. All those IAMPS has shown that *the traditional images on Military Institution now lives mixed with the social actors increased individualization and, at the same time, the globalization process, observed in contemporary societies.*

Luc Leveille: Relationship between Leadership styles and Personality Factors in Army Unit.

Canada

Introduction

The primary task of the HR specialist and research scientist in the military today concerns the study of variables related to operational/organizational effectiveness. Based on an exhaustive review of both academic and applied research in this field, Morin, Savoie et Beaudin (1994) have developed a model that incorporates four overlapping dimensions of effectiveness that occur in all given organizations. Recently, a theoretical paper was presented applying this model to the Canadian Forces (CF) (Villeneuve, Dobрева-Martinova, Little & Izzo, 2000). The "human readiness" dimension of this model has been developed even further and indicators related to operational effectiveness proposed (Léveillé, Villeneuve et Izzo, 2000). Also, the application of this model was shown as a useful tool examining issues of command and control (Izzo, Villeneuve et Léveillé, 2000). Applications of indicators of operational effectiveness in the military has expanded to include both operational deployments and garrison environments.

The type of leadership styles used by the leaders affects outcome measures such as cohesion, moral and commitment. This is becoming especially important as the nature of military tasking are changing and soldiers are required to work in new structure, such as small work-teams or working-group environments (Bartone et Kirkland, 1991).

This study will use the concepts developed by Bass (1985) on transactional and transformational leadership. This perspective has been extensively researched and validated across a variety of samples and study (see Bass & Avolio, 1995). Simply stated, Bass contended that transformational leaders are leaders who obtain support of their followers by inspiring them to identify with a vision of the organization that reaches beyond their own immediate self-interest. Transactional leaders were defined as leaders who obtain cooperation with their followers by establishing rules of exchange, and by monitoring this exchange relationship. Laissez-faire leaders were described as giving up responsibility for leading, indifferent, indecisive and often inaccessible. This conceptualization situated leadership style on a continuum, known as the augmentation hypothesis, where transformational leaders are seen as presenting additional attributes and qualities that explain variance related to leadership outcomes beyond what can be accounted for by behaviors related to transactional leaders (Hater & Bass, 1988; Waldman, Bass & Yammarino, 1990; cited in Bycio, Hackett & Allen, 1995). Transformational leadership behaviors are generally associated with higher measures of leadership effectiveness (Bass, 1985;

Bass & Avolio, 1990; cited in Bycio et al. 1995) that generalizes across type of organization and hierarchy level of the leaders (Lowe, Kroeck & Sivasubramaniam, 1996; cited in Judge & Bono, 2000). This to say that transformational leadership behaviors are associated with high-performing teams in all type of organizations (Bass, 1998; cited in Chemers, 2000).

Current research on leadership, especially in selection, is also driven by the tendency to develop a better understanding of dispositional basis associated with transformational leadership style. Atwater & Yammarino (1993), with a strategy that implied four related criterion, and using rating both by subordinates and superiors, found a significant relationship between transformational leadership style and a measure of intelligence and athletic experience. However, they did not find a relationship between personality traits defined by warm, conformity and boldness sub-scales. In similar research, using ratings of subordinates and superiors, Judge & Bono (2000) found a significant relation between transformational leadership style and traits of agreeableness, extraversion and openness to experience as measure by the NEO-PI-R (Costa & McCrae, 1992). However, it should be noted that the associations found by Judge et Bono were relatively small. Also, new concepts of personality associated with transformational leaders are being discovered as we speak (such as 'proactive' personality Crant & Bateman, 2000 or 'optimal flow' Sosik, Kahai & Avolio, 2000).

This is an exploratory study. First, it is an opportunity to investigate for the first time the relationship between leadership style and personality correlates of Section Comds and Platoon Comds of a CF unit. Second, the 'innovative' character of the study concerns a small sample of CF members limiting the choice of the statistical analysis to correlation. The nature of the study was designed to investigate three main areas. First, to explore the inter-relationship between leadership styles from the follower's perspective, second, to study if the perceived transformational leadership style of leaders is related to measures of effectiveness, and thirdly, to examine whether leadership style and personality correlates differ with respect to the follower's position in the command hierarchy.

Methodology

Sixty two participants were divided into three groups. These groups were formed on the basis of functions and responsibilities within a CF unit. The three groups were divided as follows: Group 1: Section members (Members), rank of private and caporal (61%), Group 2: Section Commanders (Section Comds), rank of sergeant (21%) and Group 3: Platoon Commanders (Platoon Comds), individuals holding the rank of lieutenant and captain (18%). The age of the participants ranged from 26 to 36+ years: 34% were 26-30, 37% were ages 31-35 and 21% were 36+ years. Participants were representative of the two official languages of Canada, Francophone and anglophone. The average years of experience within the unit for Group, 1 3.4; Group 2, 5.02; Group 3, 3.6 .

The participants in this study were members of an infantry company of approximately 120 members. Their participation was voluntary. For each study group, section members, section Comds and platoon Comds, a specific questionnaire was designed. The instrument, regardless of the questionnaire design, took approximately 45 minutes to complete. Data were collected and a global measures was assigned within each group. The Company Commander granted authorization for the study

The Multifactor Leadership Questionnaire (MLQ Form 5x-Short) developed by Bass & Avolio (1995) is a well established measure of leadership style, providing indications of the presence of the following types of leadership behaviors: a) Transformational b) Transactional c) Laissez-faire. This questionnaire contains 9 subscales for a total of 36 questions in a form available for the leader and the followers. Also, 3 additional scales of the MLQ address measures of leadership effectiveness: a) Extra effort b) Effectiveness c) Satisfaction. In this study, we rename these scales for more convenience as follows: a) Motivation b) Perceived group and leader effectiveness c) Satisfaction with leadership style. The complete form contains 45 questions. This form was validated across a variety of samples ($n=2080$) and composite scale reliabilities were ranging from .76 to .90 (Bass & Avolio, 1995). In this study, leadership styles were assessed by the leader's subordinates.

The Trait-Self Descriptive Inventory (T-SD) initially developed by Christal (1994), is an instrument assessing the big five personality factors: neuroticism, extraversion, openness, agreeableness and conscientiousness. This scale has been used primarily for selection purposes in the US army. It contains 64 adjectives and 99 sentences. For this study, an adaptation of the questionnaire was made to collect data from a follower's perspective.

The Unit Climate Profile is an instrument developed in collaboration with Chief of Land Staff personnel of the CF. The instrument comprises 62 items and is employed to gather information on climate of CF deployed personnel. For the purpose of this study, we selected a cluster of items relating to an additional measure of leadership effectiveness, namely confidence in leadership (For a more detailed description of the instrument, see Léveillé, Villeneuve et Izzo, 2000).

Results

Results indicate that the correlation between leadership styles, as perceived independently by members assessing their Section Comds and Section Comds assessing their Platoon Comds, differ. Members who are assessing their Section Comds tend to see transformational leadership behaviors of their leaders in relation with transactional characteristics ($r = .40$, $p < .05$, two-tailed).

However, follower positioned higher in the hierarchy (Section Comds assessing their Platoon Comds) tend to see transactional behaviors of their leaders being associated with laissez-faire leadership style ($r = .67$, $p < .05$, two-tailed).

Tables 1 and 2 show inter-correlational relationships between leadership styles as perceived by the follower's position in the hierarchy.

Table 1 Inter-correlations between leadership styles of Section Comds-perceived by Members and averages

Pearson Correlation

	Section Comds transformational leadership style perceived by members	Section Comds transactional leadership style perceived by members
Section Comds transformational leadership style perceived by members		
Section Comds transactional leadership style perceived by members	.402*	
Section Comds laissez-faire leadership style perceived by members	-.010	.284

*. Correlation is significant at the 0.05 level (2-tailed). N=38.

Averages on a scale of 1-4 are: Transformational= 2.6

Transactional= 1.98 Laissez-faire=.36

Table 2 Inter-correlations between leadership styles of Platoon Comds- perceived by Section Comds and averages

Pearson Correlation

	Platoon Comds transformational leadership style perceived by Section Comds	Platoon Comds transactional leadership style perceived by Section Comds
Platoon Comds transformational leadership style perceived by Section Comds		
Platoon Comds transactional leadership style perceived by Section Comds	.242	
Platoon Comds laissez-faire leadership style perceived by Section Comds	-.447	.673*

*. Correlation is significant at the 0.05 level (2-tailed). N= 12.

Averages on a scale of 1-4 are: Transformational= 2.68

Transactional= 1.93 Laissez-faire= .86

Secondly, results suggest that there exists a stronger association between transformational leadership behaviors and leadership effectiveness than other leadership styles as perceived by follower's in the two hierarchical level. This relation becomes stronger as the follower moves higher in the hierarchy structure (Section Comds assessing Platoon Comds). Additionally, results strongly indicate that followers of the two hierarchical levels see laissez-faire leadership style as negatively affecting variables of leadership effectiveness. Interestingly, this relation is less obvious when measuring confidence in leadership. Thus, results suggest that a follower low in a hierarchical structure doesn't lose confidence in his leader even if the leader demonstrates behaviors associated to a laissez-faire type. At a higher level (Section Comds assessing Platoon Comds), it appears that followers lose confidence in their leader if the leader demonstrates laissez-faire characteristics. It should be noted that there were no significant correlations

between transactional leadership style and measures of leadership effectiveness from the follower's point of view regardless of position in the two hierarchical levels.

Tables 3 and 4 represent the results of leadership styles and leadership effectiveness from the follower's perspective.

Table 3 Correlations between leadership styles and leadership effectiveness of Section Comds- perceived by members

Pearson Correlation

	Motivation of followers	Perceived group and leader effectiveness	Satisfaction with leadership styles	Confidence in leadership
Section Comds transformational leadership style perceived by Members	.436*	.435*	.444**	.182
Section Comds transactional leadership style perceived by Members	.233	.180	-.052	-.272
Section Comds laissez faire leadership style perceived by Members	-.346*	-.454**	-.458**	-.235

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed). N= 38

Table 4 Correlations between leadership styles and leadership effectiveness of Platoon Comds- perceived by Section Comds

Pearson Correlation

	Motivation of followers	Perceived group and leader effectiveness	Satisfaction with leadership style	Confidence in leadership
Platoon Comds transformational leadership style perceived by Section Comds	.835**	.681*	.656*	.471
Platoon Comds transactional leadership perceived by Section Comds	.070	-.190	-.315	-.215
Platoon Comds laissez faire leadership style perceived by Section Comds	-.415	-.490	-.760**	-.608*

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed). N= 12

Thirdly, results indicate that there is a relationship between personality traits and leadership style. Specifically, the type of relations observed between personality traits and leadership styles differ in regard to the position of the followers in the hierarchy. A significant relation exist between transformational leadership style, and the personality trait of agreeableness as perceived from a follower's position low in the hierarchy ($r = .39$, $p < .05$, two-tailed).

However, results obtained from followers positioned higher in the hierarchy are more entangled. When followers assess their leaders on leadership style and perceived personality traits, results indicate that there is a strong relationship between transformational leadership behaviors and the traits of conscientiousness ($r = .68$, $p < .05$, two-tailed), openness ($r = .72$, $p < .01$, two-tailed) and neuroticism ($r = -.69$, $p < .05$, two-tailed). However, caution must be exerted when interpreting these results. There exists powerful and significant correlational relationship between a number of the personality traits (ranging from .68 to .90).

Tables 5 and 6 show results pertaining to the relationship between leadership styles and personality traits as perceived by the follower's position in the hierarchy.

Table 5 Correlations between leadership styles and personality traits of Section Comds-perceived by Members

Pearson Correlation					
	Neuro.	Consc.	Agree.	Extro.	Open.
Neuroticism					
Conscientiousness	-.402*				
Agreeableness	-.455*	.476**			
Extraversion	-.447*	.349	.400*		
Openness	.171	.595**	.263	.037	
Section Comds transformational leadership style perceived by members	-.192	.304	.392*	.220	.185
Section Comds transactional leadership style perceived by members	.273	-.043	.265	-.063	.154
Section Comds laissez faire leadership style perceived by members	.655**	-.364*	-.045	-.460**	-.013

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed). N= 38

Table 6 Correlations between leadership styles and personality traits of Platoon Comds-perceived by Section Comds

Pearson Correlation					
	Neuro.	Consc.	Agree.	Extro.	Open.
Neuroticism					
Conscientiousness	-.903**				
Agreeableness	-.686*	.745*			
Extraversion	-.864**	.838**	.740*		
Openness	-.489	.540	.903**	.508	
Platoon Comds transformational leadership perceived by Section Comds	-.699*	.688*	.342	.457	.727**
Platoon Comds transactional leadership perceived by Section Comds	.244	.163	-.139	-.337	.107
Platoon Comds laissez-faire leadership perceived by Section Comds	.542	-.347	-.281	-.515	-.415

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed). N= 12

Discussion

Results show that for this group, Section Comds and Platoon Comds of a CF army unit, transformational leadership was perceived by the followers as being the prominent leadership style. These results are encouraging since a predominance of perceived transformational leadership characteristics can facilitate the adaptation to new tasking requiring structures such as work-teams or working-group environments. However, the level of transformational leadership attributes is not overly strong, with the range being from the 50th to 60th percentile, as compare to a norm established with a rater form of the MLQ applied in a variety of organizations (Bass & Avolio, 1995).

The results supported the link establish between transformational behaviors of leaders and leadership effectiveness (Bass, 1985; Bass et Avolio, 1990; cited in Bycio et al. 1995). It appears that as followers progress higher in the hierarchy, the more they believe in the effectiveness of the transformational behaviors of their leaders. Also, as their confidence in the effectiveness of these transformational behaviors increase, the less tolerant they appear to be toward transactional type behaviors of their leaders since they tend to be perceive in association with laissez-faire type of behaviors.

Other results support the movement aimed toward defining the nature of the relationship between dispositional factors and transformational leadership behaviors (Atwater & Yammarino, 1993; Judge & Bono, 2000). From this perspective it seems that at a lower level in the hierarchy when

followers assess personality traits and leadership style, transformational behaviors are associated to fewer and less complex traits. These results can be explained by considering that followers at this hierarchical level see transformational behaviors associated with transactional characteristics. In addition, there is an indication that followers higher in the hierarchy show lack of differentiation between personality traits associated with transformational behaviors. This may be related with the psychometric properties of the instrument used to assess personality traits (T-SD). Another explanation may be that at this level, followers evaluate leaders from a more distant perspective, where lack of knowledge relevant to leaders characteristics predominate. Nevertheless, further analysis is required. It is suggested that this analysis begin with an examination of the sub-scales of instrument used in this study.

References

- Atwater, L. E. & Yammarino, F. J. (1993). Personal Attributes as Predictors of Superiors' and Subordinates' Perceptions of Military Academy Leadership. *Human Relations*, 46 (5), 645-668.
- Bartone, P. T. & Kirkland, F. R. (1991). Optimal Leadership in Small Army Units. In R. Gal and A. D. Mangelsdorff (ed.), *Handbook of Military Psychology*. New York: John Wiley & Sons.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B. M. & Avolio, B. J. (1995). *MLQ Multifactor Leadership Questionnaire*. California: Mind Garden.
- Bycio, P., Hackett, R. D. & Allen, J. S. (1995). Further Assessments of Bass's (1985) Conceptualization of Transactional and transformational Leadership. *Journal of Applied Psychology*, 80 (4), 468-478.
- Chemers, M. M. (2000). Leadership Research and Theory: A Functional Integration. *Group Dynamics: Theory, Research, and Practice*, 4 (1), 27-43.
- Christal, R. (1994). *The Air Force Self-Descriptive Inventory*. Final R&D status Report: November 1994. United states Air Force.
- Costa, P. T. & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: PAR.
- Crant, J. M. & Bateman, T. S. (2000). Charismatic Leadership Viewed from Above: The Impact of Proactive Personality. *Journal of Organizational Behavior*, 21 (1), 63-75.
- Izzo, R., Villeneuve, M. and Léveillé, L. (2000). Military Unit Effectiveness Model: A Tool for Command and Control. Paper presented at the 42th International Military Testing Association, Edinburg, Scotland, November 2000.
- Judge, T. A. & Bono, J. E. (2000). Five-Factor Model of Personality and Transformational Leadership. *Journal of Applied Psychology*, 85 (5), 751-765.
- Léveillé, L., Villeneuve, M. and Izzo, R. (2000). Military Unit Effectiveness: A Theoretical Framework and a Practical Application. Paper presented at 36th International Applied Military Psychology Symposium, Split, Croatia, September 2000.
- Morin, E.M., Savoie, A. and Beaudin, G. (1994). *L'Efficacité de l'Organisation: Théories, Représentations et Mesures*. Montréal: Gaetan Morin.
- Sosik, J. J., Kahai, S. S. & Avolio, B. J. (2000). Leadership style, Anonymity, and Creativity in Group Decision Support systems: The Mediating Role of Optimal flow. *Journal of Creative Behavior*, 33 (4), 227-256.

Villeneuve, M., Dobрева-Martinova, T., Little, G. and Izzo, R. (2000). Military Unit Effectiveness and Readiness: A Theoretical Framework. Paper presented at Human in Command Conference, Breda, Netherlands, June 2000.

Beatrice van Zevenbergen-Snel: PRISMA: Developments in collecting management information.

*Royal Netherlands Army
Behavioural Sciences Department
Personnel & Organisation Service, Netherlands*

Since 1997 the Royal Netherlands Army (RNLA) has been using PRISMA to provide management information on the opinions of its personnel and the population about the army. In Dutch, PRISMA is an acronym for Periodic Reporting Image, Satisfaction and Social Acceptance. We collect data continuously. We report on the results three times a year. Each report contains information about the standard topics: job satisfaction and retention intention for personnel, and image of and appreciation for the army for the population. Besides this standard section of PRISMA, commanding officers can ask for specific information about specific units or about specific groups of personnel. They also have the possibility to insert questions about current relevant topics, even for a specific group of personnel. Last year for example, officers and NCOs were asked about their experiences of pressure of missions abroad. Hans Jetten's paper will discuss this topic in detail.

Although PRISMA is a flexible and successful instrument, we are still working on improvements. In the past four years, we have made some changes in the way we collect data and in the way we report. In this paper, I will discuss some of these changes: Why did we change our methods of data collection and reporting, and what are the consequences of these changes?

In short, the following topics will be discussed:

- short introduction to PRISMA;
- reasons for and consequences of changes in methods of collecting data;
- reasons for and consequences of changes in reporting results;
- conclusion and discussion: future changes?

Short introduction to PRISMA

In 1997 the RNLA started PRISMA, the instrument to monitor the opinions of both its personnel and the Dutch population about the Dutch army. The Commander in Chief gave us the assignment to measure job satisfaction and appreciation for the army continuously. That was the main reason we started PRISMA.

In PRISMA, we collect data on the opinions of three different groups:

- The Dutch population;
- Officers, NCOs and civilian personnel;
- Fixed-term contract military personnel.

The Dutch population is questioned about their opinion of the RNLA; how do they rate the performance of the tasks and how valuable are these tasks to them?

Both military and civilian personnel are questioned about their job satisfaction, motivation, commitment and intention to stay within the organisation (retention). Out of the various topics that are surveyed in PRISMA, job satisfaction is the main issue. We measure this by asking the personnel (fixed-term contractors, officers, NCOs and civilians)¹ 18 questions. The score for 'General job satisfaction' is compiled from the mean value of these 18 questions.

The reliability of this indicator is high (cronbach's alpha > .80).

Reasons and consequences for changes in methods of collecting data

We started with two different ways of collecting data: telephone surveys to measure the opinions of the Dutch population and to measure the opinions of officers, NCOs and civilians; and written questionnaires to measure the opinions of fixed-term contractors. The changes in these methods will be discussed in the following sections.

Changes in Method of data collection from the Dutch population

We started measuring the opinions of the Dutch population through telephone surveys. These surveys were conducted by an external agency. We have been working with this method for four years. At the beginning of 2001, we started working with another agency and we changed the way the data was collected. This new agency offered the possibility of measuring opinions through an Internet panel.

Using an Internet panel has several consequences:

Response rates are higher with a panel than with random calling. Now response rates are 90%. In the past response rates were only 25%.

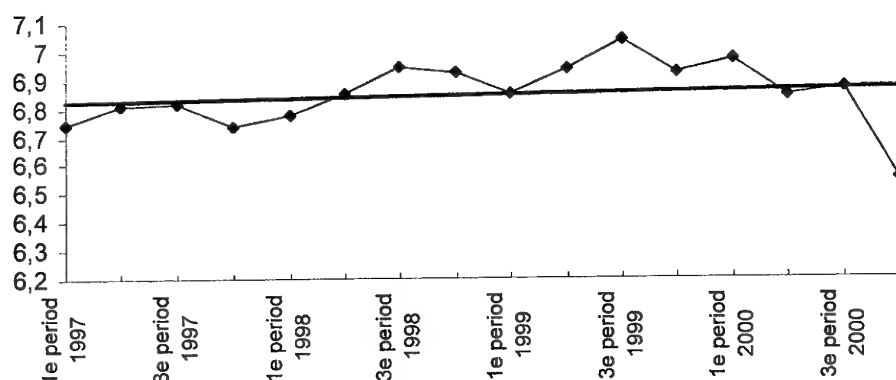
The Internet panel is a good representation of the Dutch population. This means that we can generalise our results more easily than before. We do not have to weigh our results any more.

The panel is big enough not to have panel effects.

Another advantage of this method is that it is much cheaper because fewer personnel are needed.

A less positive effect is that the results changed when we started using this method. In the figure below you can see what the differences are. The effects of methods also became apparent when

we changed agencies in 1997.



Changes in methods of data collection from officers, NCOs and civilian personnel

From the moment we started with PRISMA in 1997, we have used telephone surveys to measure job satisfaction and the opinions on working for the military. Officers, NCOs and civilians are called at home (in the evening and on Saturdays) to answer the questions. These telephone surveys are performed by an external agency. Before 1997, we also used an external agency to do telephone surveys. Since 1991, we have build experience with this method.

This method results in high response-rates. Almost 90% of the personnel cooperates. Personnel who do not want to be called can notify us and we will delete their names from the file that is used for these interviews.

We are working on developing a new way of collecting data: we are going to use the Intranet (an Internet for the RNLA) to collect data. We will send out questionnaires by e-mail, people can fill them in and return them to us. Data will be collected automatically in a central database.

Advantages of this system are:

- respondents can fill the questionnaires in at work: they don't have to invest their own time;
- respondents can think longer about their answers;
- it is cheaper because we will not need an external agency any more.

Methods of data collection from fixed-term contractors

We have made a questionnaire in which we ask several questions about working and living in the army. In 1997, we started collecting data by visiting a couple of units every three months. In visiting, we asked the commander to have all his people in one room, we would tell them about the aims of the questionnaire, they filled it in and we left. We hoped to have high response rates, but we didn't. Not all fixed-term contractors of the unit were there because of sickness, courses, their not wanting to participate or commanders' not being interested. Besides these low response rates per unit, another disadvantage of this system was that we could only survey a couple of units per period. So, it was difficult to generalise the results to the whole population.

To deal with these problems, we decided to stop visiting the units and instead send the questionnaires to commanders who had to give them to their personnel. Advantages of this system are:

because we can send questionnaires to personnel in different units, we can generalise outcomes to represent the whole population.

people can fill in the questionnaire at a time that is convenient for them.

it is less time-consuming for the researchers

Besides these advantages, this method still has specific disadvantages. Response rates didn't improve compared to earlier methods. Although the response rates are still high enough to report, we are constantly looking for ways to deal with this problem. We are experimenting with other methods of collecting data. For instance, in 2000 we sent questionnaires to a group of personnel at their home addresses so commanders didn't have to give them to the personnel. This didn't produce higher response rates, but it may be able to help guarantee anonymity.

At the moment, we are working on an inventory of people who have access to a computer and/or to the Internet. If there are enough people who can be (and want to be!) reached by the Internet, we will start a pilot using electronic questionnaires.

Reasons and consequences for changes in reporting results

Besides the management information we report to the Commander in Chief three times a year, we also report on the results to other (decentralised) commanders. In the first year PRISMA started we compiled quarterly reports. These reports didn't change, except for the latest results of course. Because of the large amount of work and the relatively low value of these reports, we decided to compile only one report on paper a year and compile e-mail reports for each commander who needed the results of their own unit.

The advantages of this system are:

not bothering commanders with the same information four times a year, but just mentioning important results and changes;

fewer working hours needed. We developed a system with which the e-mail reports can be compiled within a couple of hours. A large part of the analysing and reporting is automated, so now we can easily compile reports for as many units as needed;

with the annual reports on PRISMA, we can provide more information than in the quarterly reports. Extra attention is given to important topics or groups.

Besides the e-mail reports, we also report the results in a human resources periodical. With these reports, we can reach human resources managers who have an interest in the results. In every edition of this 'P&O News' we write an article about PRISMA. Besides the latest results, a special topic is discussed every time. For example, why is job satisfaction important, or what are the implications of measuring retention.

To reach even more people within the organisation, besides commanders and HR managers, we decided to develop a home page for the military Intranet. All personnel will be able to check it for the results. They can look for the results of their own units, and for previous results.

Information on theoretical issues (what is job satisfaction, e.g.) can also be found on the Intranet.

Conclusion and discussion

The main question was: why did we change our methods of data collection and reporting and what are the consequences of these changes?

In this paper we have discussed what has been changed, and why. Getting better information to generalise to the population and reducing workload are two of the main reasons for changing the methods of collecting data and reporting about the results.

One of the consequences of changing our methods of collecting data was the change in the results. There is no good explanation for it so far. Diminishing response rates are another worry. This problem is not unique to PRISMA, but is common in lots of studies. So all in all, although PRISMA has proven to be a good instrument for collecting management information, we are still working on ways to make it better.

Appendix

Questions for personnel (fixed-term contractors, officers, NCOs and civilians)

All questions start with: "Please indicate with a number between 1 and 10 how satisfied you are with":

The leaders of the RNLA

The way in which the RNLA treats you

The way in which the RNLA treats its personnel

The manner of leadership within the RNLA in general

The availability of information the RNLA

The way in which the work is organised (rules, procedures, waiting times)

The work (the work content, what you actually do)

Your immediate boss

Your colleagues

The atmosphere in your workplace

The appreciation for your work you receive from the people around you

Your salary (payments, allowances)

The working hours (starting and finishing times, overtime, breaks)

The courses offered at the RNLA (opportunities, quality)

The resources and materials you work with

The environment in which you work (office, buildings, workspaces)

Your career opportunities

Your job security

Questions for the Dutch population

If you were asked to give a score for your appreciation of the RNLA, what would that score be?

How important do you find the following tasks of the RNLA?

How well do you think the RNLA does its the job?

defending Dutch territory

taking part in peacekeeping operations

providing humanitarian aid

providing support in the event of national disasters in the Netherlands

Gheorge Pertea, Silvia Isari: Test Correlates of Military Success in a Special Force Intensive Training Exercise Conducted in English.

Romania

INTRODUCTION

Special forces must have special physical and psychological features to successfully carry out the tasks assigned to them and these features have to be taken into account by all effective selection processes.

Selection criteria and testing methods have to have predictive value as to selected military personnel success, first of all related to their adjustment to a specific and intense training programme.

To this purpose, predictive or external validity of test-examinations of a training programme is studied comparing test results with criteria-data on military personnel success collected by the researcher at the end of the programme by a valid procedure established to this aim.

OBJECT AND METHODS

Psychological assistance we provided for military personnel selection (up to 32 years old non-commissioned officers and officers for Armed Forces' intelligence structures) and our participation in planning and proceeding of the programme for intensive training of those selected based on the exercise testing the ability to perform special force tasks gave us the opportunity to investigate validity of the following selection criteria and methods:

Tests for psycho-physical condition and proficiency:

Arm strength (push-ups);

Leg strength (genuflexions);

Abdominal muscles strength (abdominal exercises);

Running endurance (3,000 m);

Apnoea endurance (time in which air is kept in your lungs and no breathing is taking place).

Cognitive and personality psychological tests:

W – Wonderlic intellectual efficiency test;

B53 – Bonardel non-verbal general intelligence test;

D.A. – Prague distributive attention test;

C.A. – Concentrated attention test;

IA9 – the 9th issue of category memory of Amthauer I.A. general intelligence test;

A.C.S. – critical thinking test (absurd and correct stories);

S – information stress test (semantic discrimination when time lacks);

E.P.Q. – Eysenck personality questionnaire (E, P, N, L, C);

14PF – Iampolski 14 personality factors questionnaire (N_1^- , P_2^- , D_3^- , C_4^+ , I_{m5}^- , A_6^+ , T_{i7}^- , S_8^+ , S_{e9}^+ , F_{e10}^- , I_{p11}^- , A_{s12}^- , I_{13}^- , S_{z14}^+);

IEQ – internalism/externalism questionnaire comprising a rumour endurance scale (r) based on Chelcea Septimiu;

I-E. S – internality/externality scale based on Rotter;

T – Temper questionnaire based on Rusalov and comprising 9 scales (EPA, EPC, PA, PC, TA, TC, EA, EC, L);

R – Rosenzweig personality projective test comprising 7 indicators (GCR, OD, ED, NP, E, I, M).

English skill test (ELT – school marks 1-10).

Filling of anamnestic record and individual interview with selection committee.

Selection process ended about two months before the intensive training programme has started and was carried out in different selection centres that were visited by the Committee. After applying a rigorous evaluation algorithm the Centre in Bucharest selected the best officers and non-commissioned officers according to the methodology used and taking also into account the number of available seats in every training centre. General evaluation algorithm included the following actions:

Candidates classification according to their performances after each physical fitness test (there were no differences between officers and non-commissioned officers);

Classifications based on physical-sportive tests were aggregated, all tests being equally important in this stage (numbers indicating the places were added up and the candidates were arranged in increasing order depending on the sum of places obtained after performing the five physical tests);

The candidates in the same selection centre were arranged in decreasing order depending on the sum of scores obtained in cognitive psychological tests (7 tests having the same weight in this stage); thus classification based on psychological test was made, personality test scores being taken into account only in the final research for validation;

The mark for English skill test was an average of written paper and oral examination and it was taken into account only when one of those declared admitted, based on the general classification obtained by aggregation of the partial classifications (physical fitness tests and psycho-cognitive tests), was declared not-admitted as far as English skill test was concerned; in this situation the person declared not-admitted at English test was replaced by the next candidate being under the line of admittance according to the general classification;

By aggregating the two partial classifications (physical tests, mental level tests) the general classification of the candidates in a selection centre is obtained, both criteria having the same significance as far as value is concerned. Selection method based on this algorithm taking into account both physical and mental attributes of the military personnel meant to man special force may be improved when, after validation study, weight of each criterion and method in predicting personnel performance during specific training programme is determined.

Such an increase in selection quality is possible because an appropriate selection basis is provided for research structures (at each centre came at least twice more candidates than available seats) each time. A group of 60 eligible students and several reserve candidates were selected at each selection centre. This group attended an initial training course carried out by each training centre. The group was to be reunited in one centre to attend 2 weeks intensive training programme that is very exhausting and specific for special force.

The initial training includes collective and individual training meant to homogenise the group as far as some fundamental attributes are concerned. The selected personnel were notified on their performances in physical tests during selection process as well as standards they had to reach during this preliminary period.

The group, reunited to attend the intensive training in classroom and divided in elements in the field, underwent small changes as to the number of initially selected persons. In all centres

the selected group was extended by 2-3 reserve persons in order to stimulate competition within initial training programme.

Criteria-data collection, initiated when the students graduated the two week intensive training programme, consisted of a classification test inviting each student to evaluate his or her own performances and those of his or her patrol colleagues (each patrol was comprised of 6 fighters who were always together – they even slept in the same bedroom) in a written paper. This method of criteria-data collection was used because trainers planned for this programme only goals pertaining to intensive training programme and did not include goals pertaining to student individual evaluation. The form the student has to fill with his or her classification evaluation included patrol members' names in alphabetical order.

Each student has to fill the boxes matching the names with the place or order number he estimates his patrol colleague deserves according to training level and skills showed during the application. Each fighter had to independently fill a form and forward it immediately or subsequently. Most graduates filled it on spot and forward it.

The six classifications obtained from each patrol were aggregated into one classification for the element (according to the level average mark).

In order to compare, based on calculation of simple and multiple linear correlation, this criterion-indicator with student performances during selection process (with predicting data) all data on military personnel performance were transformed into T standard marks (to have the same measurement unit).

RESULTS AND CONCLUSIONS

As a result of calculation of simple and multiple linear correlation with the applied synthetic criterion (inter-evaluation of elements), 11 examinations were validated out of 18 test-examinations used in military selection process and 38 indicators provided by these and resulted in 9 predictors.

As Table no 1 indicates, psychological tests resulted in 6 predictors (endurance to information stress and intellectual potential resulted from an efficiency test, impulsiveness, asociality, energetic potential for communication, tendency towards dishonesty - resulted from personality tests) and physical-sportive tests resulted in 2 predictors: a simple one (place in 3,000m running competition) and a composite one (general classification for physical education obtained by integration of partial classification in all physical examinations). Rating for English skills is an enough powerful predictor for success in the exercise for special force training. (It has to be mentioned that this is the result of the fact that the language used during the exercise was English and, as other psychological research indicates, performances in learning foreign languages are significantly correlated to individual intellectual potential.)

It is estimated that officers and non-commissioned officers obtaining high scores in endurance to information stress test (S), intellectual potential test (W), impulsiveness scales ($I_m - 14PF$) and asociality ($A_{s12} - 14PF$) and low scores in energetic potential for communication (EPC - T) and tendency towards dishonesty (L - EPQ) scales as well as high rating for English skills and a good place in classification after 3,000m running competition and in general classification after physical education tests have the best chances to be positively evaluated (considered of high value) by their colleagues in the element, who are participating in a specific and intensive training programme for special forces and in which English language is used.

Table no 1

Test-correlates for success in intensive training application for special force, in which English is used

$N = 48$ $R = .82$ $R^2 = 65$ $p < .001$

No	PREDICTOR VARIABLE	EXAMINATION, TEST	VALIDITY COEFFICIENT r	WEIGHT β
1	Endurance to information stress	S	.53 ^{*****}	.129
2	Intellectual potential	W	.49 ^{*****}	.035
3	English skill level	ELT	.39 ^{****}	.3334
4	Running endurance classification	3,000m Test	.37 ^{****}	.228
5	Impulsiveness (I_{m5})	14PF	.36 ^{***}	.022
6	Asociality (A_{s12})	14PF	.34 ^{***}	.019
7	General physical training	5 Physical exams	.33 ^{**}	.018
8	Energetic potential for communication	T	-.332 ^{**}	.021
9	Tendency to lie (L)	E.P.Q.	-.30 [*]	.020
K CONSTANT			-3.662	

$p < 0.001$ ^{*****}

$p < 0.005$ ^{****}

$p < 0.01$ ^{***}

$p < 0.01$ ^{***}

$p < 0.02$ ^{**}

$p < 0.05$ ^{*}

We found out that impulsiveness (I_{m5}) and asociality (A_{s12}) support performance in the case of selected groups for special force although for population groups they underscore negative attributes of personality. Empirical intuition concerning necessity of a certain degree of impulsiveness, egocentric hardness, affective coldness, "cool blood" of successful fighter who chooses and is able to attend programmes for special forces. So, self-description based on a personality questionnaire (14PF) can prove this.

Tendency to lie (L) that is in negative correlation with positive evaluation in the groups training for special force does not irritate because the direct, self-critic and critic approach of inter-personal relations is obvious. On the contrary, the high energetic potential in communication (EPC) seems to be unjustly punished. Knowing the content of temper questionnaire scale used to record test results, we conclude that the high score for energetic potential for communication scale (at the expense of the score for energetic potential for activity) is negatively sanctioned in such military groups (those manifesting tendency to speak at the expense of tendency to act are not valued in these situations).

We find out that R multiple correlation coefficient is 0.82 and R^2 determination coefficient is 65. Multiple regression term being established, as in the above table, the global

predictive indicator may be calculated. It indicates that selected military are successful in similar training exercise for special force during which English is used.

Therefore efficiency of selection of military personnel for similar special tasks would increase if a range of criteria and testing methods completely covering the main categories of psycho-physical and personality attributes needed in intensive training programmes had been used.

The predictive value of the current "selection battery", lacking in test indicators without informative significance, amplified. Examinations and tests to which weight coefficients were attached became more operational and resulted in more information on selection goal.

BIBLIOGRAPHY

Personnel Psychology – Measurement and Interpretation of Individual Differences, Horia Pitariu and Monica Albu, Cluj University Press, 118-22, 1997.

Assessment of Complex Skills and Personality Characteristics in Military Services - Peter Braun, Dieter Wiggant and Herbert Aschenbrenner, "Handbook of Military Psychology", 37-65, by John Wiley, England, 1991.

Personality Factor Role in Achieving High Performances During Special Task Training of Officer - Lt-col. Gheorghe Perța, "Psychology, Psycho-sociology, Sociology – Contemporary Issues" – INI Publishing House, Bucharest, 1997, 183-90.

Alvaro Oliviera: Study on Motivation of Young People to Join the Army.

Applied Psychology Center of the Army, National Defence Ministry, Portuguese Army.

This National Investigation (implemented in Continent and Islands) pretends to analyse young people motivations to ingress in contract and volunteer regime. This regime proposed by Armed Forces took the place of military service obligatorily and using attractiveness and competitiveness abilities faces the work market as an employer entity.

The analysis universe is composed by young people who are integrated in school system (more precisely in 9th and 12th level or equivalent) and by young people who are already in work market.

Concerning methodological instruments to collect and analyse information, it was built a representative sample of the universe that will be analysed through qualitative techniques (exploratory and deepening interviews) and quantitative techniques (inquiry) in a complementary logic.

Up to the moment, all phases compounding the fieldwork are concluded and it is predictable to present the final report on November 2001.

INTRODUCTION

The end of military service obligatorily justifies an investigation development, with the following goals:

To evaluate young people motivations in order to apply to the new volunteer ingress regime,
To characterise their representations about military Institution as an employer,

To study an appellative product to motivate young people to ingress in this regime, Analysing these young people perception factors is a very crucial task to understand the aspects that influence their decisions to ingress in the regime proposed by Military Institution.

This article main goals are to present the investigation aims, to clarify its theory frame and to characterise its collecting and analyse methodologies.

Problematic and Objectives

Legislative alterations indicate the existence of an army composed mainly by volunteers. Coming in to the market work as another employer, Portuguese Army will face supply and demand laws.

This investigation pretends to analyse young people motivations to ingress in contract and volunteer regime, proposed by Armed Forces. To check its attractiveness and competitiveness abilities as an employer entity, it is important to collect specific information in order to define young people's accepting level to this new volunteer military service model.

The main proposes are to characterise the young people position about the possibility to apply the military Institution and to identify the factors, which influence their decision process. This aim includes checking compensations and incentives attractiveness ability.

The second main aim consists in an information qualitative analysis, that young people have about the Military Institution. By one hand, this analysis will contribute to decision factors interpretation and on the other hand it will help to know information's origins and channels' circulation as well. These last refereed aspects are important to improve publicity and publishing campaigns.

A third aim of this investigation is related with publishing to the young people the new volunteer and contract regime. So we pretend to identify a better way to publish the information and better locals to do that.

Related to this aim development, a set of questions does constitute a problematic guide to the investigation. The questions are the following ones:

What is the young people acceptance level to the new service regime proposed?

Which are the conditions that lead them to accept the ingress?

Which is the attractiveness level that incentives proposed by the Military Institution, have to the young people?

Which is their confidence level about Military Institution as an employer entity?

What kind of factors influences their decision?

In which way the non-acceptance decision to ingress the Military Institution is related to its given image, to the ingress regime structure that is proposed, or to the incentives characteristics compensating the ones who accept the ingress?

What kind of information do the young people have about the military Institution and what is that information's origin?

What representations did the young people build concerning: Military Institution professional prestige, Public advantage degree and its mission development value.

What can Military Institution offer to young people with a positive acceptable meaning?

These related aims are approaching to one common interest.

- Which is the most adequate way to motivate young people to Military Institution proposals?

Reaching the answer depends on a theoretical frame building encircling and analysing the decision factors and at the same time to clarifying the Institution itself about the young people's interests, expectations and professional projects.

In a global way, this investigation will probably bring to the Institution useful information, related to human resources political definitions such as recruitment, selection and formation and related to contend and methods information spreading to young citizens and their relatives in an effective way.

Before continuing this work development, it is necessary to clarify youth conception in a way we pretend to use it. Youth conception is a socially built category; registered by heterogeneity that allows us to distinguish situations, apparently included in a category, from differentiated and signed attitudes with singular characteristics², becoming, in this way, the individual factors more perceptible.

Although it is a concept including some convergence areas such as common traits or situations share, it doesn't hide the heterogeneity, existing among the different groups of young people, which is determined by the social origin and by different ways of living in social insertion.

The most interesting common traits to this work are age and necessary conditions to ingress. These common traits can be seen as a population category and for institutional and symbolical reasons they have a strong importance in the relation between Military Institution and society. Concerning methodological instruments of analysing and collecting information, it will be used in this study a representative sample of the study universe and it will be treated, with qualitative and quantitative techniques.

STUDY UNIVERSE AND SAMPLE CHARACTERISTICS

The analysed characteristics of the universe are the following ones:

- 1) 9.th level Pupils
- 2) 12.th level (general; technological; university access)
- 3) Appellant teaching pupils
- 4) Professional School pupils

Concerning Professional Schools we are going to analyse only the ones from the 3rd level (equivalent to 12th level), for the reason that the 2nd level ones (equivalent to the 9th level) are only 148 and this fact is not statically relevant.

- 5) Employee and Unemployed Young people or Professional Formation Centre's Pupils with ages between 16 and 18 years old.

Generally the study universe is constituted by young people who are integrated in scholar system and by young people that renounced it, expressing therefore different living experiences situations.

Concerning the scholar system integrated young people, it was preferentially chosen the 9th and 12th level (or equivalents) pupils, for the fact that this school period is the best to develop decisions taking process, in professional and school areas which will be decisive to their future lives. In this way, it is important to identify factors and values that influence their decisions such as leaving school. We also pretend to know what are their future expectations and the arguments that justify and characterise their decisions as well.

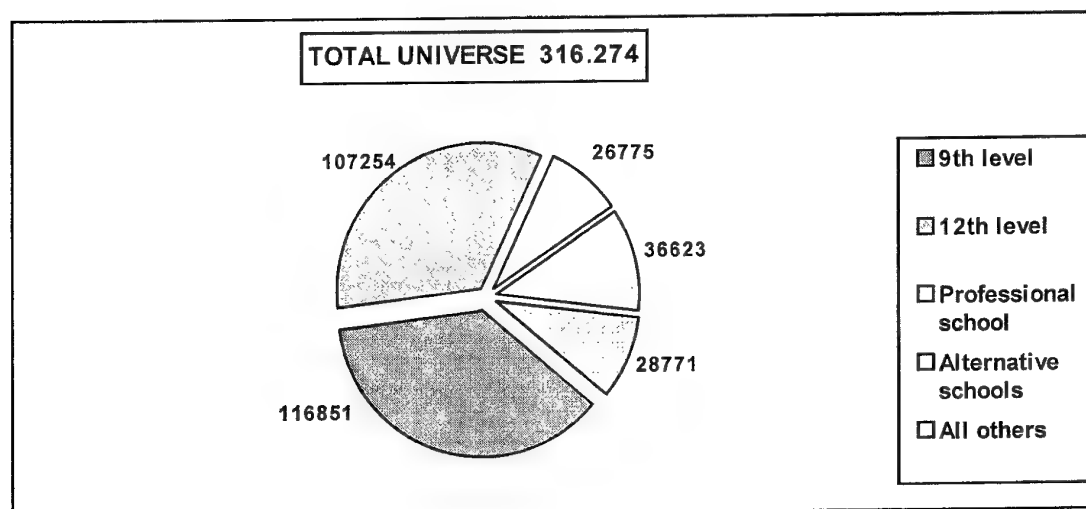
² Angelina Carvalho, "Da escola ao mundo do trabalho", IE 1998

Influencing aspects in the decision acknowledgement contributes to develop new publishing strategies, about the volunteer and contract regime, and to improve possible attractive aspects to the young people.

3.1 Study Universe Distribution:

The 1) and 4) items constitute 90% of the Study Universe, although the item 5 is represented by 10%. In this way our universe distribution is the following one:

Figure-1



3.2 Technical Characteristics of the sample:

Supposing that this UNIVERSE is constituted by 316.274 cases and that there are considerable differences among them, it's necessary to determine a representative Sample, as a Universe photograph, definition. The sample will be, respecting the study universe characteristics, stratified and proportional.

To structure that sample, we will use stratification scientific principals in order to in structure point of view; create a similar study universe sample.

These principals have to do with variables selection that, direct or indirectly, restricts in a significant way, the studying problematic. In this sense, there do from cientific point of view, an indispensable variable set to the investigation about Portuguese population, constitute strong explanation axles.

The Stratification variables are the following ones:

- North / South – characterises the main culture axle (mentalities, costumes, habits);
- Coastland/ Countryside – constitutes the main economical axle;
- Gender;

- Age;
- Instruction level;
- School establishment nature
- Habitat (related with the urbanisation level)

3.3 Sample Dimension

The estimated dimension to our sample is 4000 cases. This value is due to the Universe heterogeneity and to the information desegregation.

We must guarantee the minimum representativeness, in each universe stratum for the reason that it is necessary to organise the information by strata (such as 9th level pupils, 12th level pupils or equivalent). The minimum chosen was 400 cases (the first value decreases the error margin below 5%)

- Sample confidence level: 97.5%
- Estimated error margin: 2.5%

4. CONSIDERATIONS ABOUT METODOLOGIES

Concerning to methodological instruments of analysing and collecting information, it will be used a representative sample of the study universe that it will be treated in a complementary way, through qualitative and quantitative techniques

Exploratory Interviews

Through this technique, it is possible to know the language characteristics used, by the young people in order to adequate the language style in the inquiry. This fact contributes to an exploratory approach to young people objectives and to the image that they have about Military Institution. This contribution is particularly important to formulate the inquiry questions. The exploratory interviews will be done, according to main study population characteristics: Unemployed and Employee Young people and 9th and 12th young people. It will be interviewed 10 to 15 individuals from each stratum and these interviews will be treated through content analysing.

Some deepening interviews can also be done to complement and to deepen quantitative data taken from the inquiry data treatment.

Inquiry:

The whole sample will answer to an inquiry, whose aim is to collect necessary information to answer to the investigation problematic.

The inquiry is divided in two parts. The first one has the following questions set:

School life, Education and Professional Projects Answers Characterisation
 Opinion about the Army Forces and Military Service Characterisation
 Volunteer and Contract Regime Opinion
 Personal and Familiar Characterisation

In the end of this part, the individuals watch a film, whose objective is to show the main military profession characteristics and several activities usually done in this kind of job.

After the film (with 4 minutes lastingness), the individuals answer to the 2nd part of the inquiry, which has the following questions set:

General Appreciation about the Film;

Most Attractive Activities;
 Opinion Evolution about the Armed Forces and about the Ingress in Volunteer and Contract Regime;
 Information about places, where it should exist more information about Military Institution.

5. THEORETICAL FRAME

Before trying to answer this problematic, it is necessary to analyse the relationship between Military Institution and Society, in which it is included and interacts with other institutions, since "Armed Forces Study is also its organisation and its relationship with society study³."

Regarding the new military service regime characteristics (based on professional contracts) and according to the incentives (nature and objectives, to the ones who accept the ingress), included in the military Service new law (skills acquisition to the future insertion in society), it should be considered a theoretical conception that makes a relational analysis, pointing out military institution as an employer agent that interacts and compete with other agents.

It is in this relational approach that young people will reflect about their decisions, analysing in a comparative way several employing proposals.

Following these proposals, it will be done a reflection about an inter-relations set, established between the young people and the main incentives proposed by Military Institution to the ones who accept the ingress in the volunteer and contract regime. It is interesting, for the reason that the vectors include the main compensations, to analyse the young people in their relation with scholar system, work market and professional formation market.

To clarify these inter relationships it is necessary:

- To characterise young people school aspirations, from the ones who stayed in scholar system,
- To evaluate the expectations from the ones who renounced it and to verify how definitive the character of that decision is,
- To characterise their professional expectations
- To understand what role school and professional formation perform in building up young people life projects.

Having this dimensions knowledge, it is possible to verify in which segments can the several incentives contribute to increase the ingression.

5.1. YOUNG PEOPLE AND SCHOOL SISTEM

Having the support of the results of an inquiry aplicated in 1997⁴, to young people whose ages are situated between 15 and 29 years old, their situation towards to scholar system was the following one: 57,7% concluded their school trajectory, while the rest 42,3% were still in school system.

However, these 57,7% from the whole inquiries that concluded their school formation, didn't totality reach the obligatory schooling. On the contrary, 50% from these individuals renounced school system, having just the 2nd preparatory schooling cycle.

³ Rafael Bañón e J. A. Olmeda, "El Estudio de las Fuerzas Armadas". In La Institucion Militar en Estado Contemporaneo. Alianza Editorial, Madrid 1985, Pág. 16

⁴ "Jovens Portugueses de Hoje", coord. M Villaverde Cabral e J.M. Pais Ed Celta 1998

Analysing the school renouncement in the young people with the age to ingress in the Armed Forces, we see that 73,4% from the ones who renounced school system, with ages situated between 15 and 17 years old, have just made the 2nd preparatory schooling cycle or even less and only 22,8% finished the 3rd secondary schooling cycle.

These numbers get even more importance when we consider that the period age included by educational system bases law 1986, imposes 9th level as the minimum obligatory schooling.

The ones who left school, whose ages are between 18 and 20 years old, 51% achieved the 2nd cycle or even less, 32.6% ended the 3rd secondary school cycle and 13,4% ended the complementary. We can conclude that a significant percentage of teenagers have a school path with a low profile qualification. Respecting to how these teenagers face their giving up decision, that study's author states that they don't regret that situation.

From those who gave up school, only 10.4% would like to go on with their studies, 44.2% said that they don't mind that they have left school, meanwhile 37.7% would have liked to go on but they won't do it again.

Considering all age groups, the conformist attitudes towards giving up school are predominately "the bound cessation irreversibility to scholar institution appears to be a structure characteristic in young people's life projects, represents in 90s by significant number" ⁵. However, in our point of view, the conformist state is different from a satisfaction state towards the situation. In that senses it will be important to understand which are the basic factors of this conformist attitude: familiar spends, remuneration needs; missing time to conciliate work with studies and so on. This allow us to understand at what point the combined offer – jobs and the possibility to proceed with studies – can change this conformist attitude.

The reasons pointed by teenagers to justify giving-up school, are related with integration difficulties towards school's contests and reasons related with familiar aspects or economical difficulties. The reasons related with integration difficulties have an explicative importance in the phases when giving up school appears sooner, the family related reasons are more important in the way that giving up appears in more advanced scholar years. In this sense, the assessment instruments have to assess these situation dimensions and have to identify the necessary factors towards an attitude change.

Concerning the teenagers who stayed in the scholar system, we can see mainly in advanced scholar paths a raising increasement, especially in the ones where there is a possibility to achieve a high or middle class diploma. In this targeted population segment, teenagers can face the proposed incentives by the military institution, in a competitive way.

For the ones who are planning to go on in scholar system, the incentives proportionate them a group of opportunities allowing them to achieve their goals. For that reason it turns to be worthwhile to analyse the costs and benefits of the ingression in military institution, but besides the diploma, which can be obtained by other ways, what can they achieve more? So possibility to accept this incentive by those teenagers can be not so automatic, as we can think.

⁵ Natália Alves, in "Jovens Portugueses de Hoje", coord. M Villaverde Cabral e J.M. Pais, Pag. 68 Ed Celta 1998

5.2 TEENAGERS AND PROFESSIONAL FORMATION

Besides the importance that everyone knows, professional formation isn't much attractive to the young people. For example, in a young people universe, with ages between 15 and 29 years old, 13.8% participated; at least, in one professional formation course and from the ones who never did it, only 10% affirmed that they would like to do it.

The teenagers, who are more interested to do professional formation courses and express the need with the goal to enhance their situation, are the ones who are already in a work environment.

Those who aren't working don't feel this kind of need and the ones who are in scholar system don't express that need as well, because they expect to acquire scholar credentials acknowledge and to be valorised in the work market.

Having a close connection with work market, professional formation has the main role to prepare people to do professional tasks in an efficient way. In this way, the proposed incentives have a great importance not only for the individuals that choose the ingress in Military Institution but also to society.

Professional formation can play an important role in creating the necessary skills to achieve professional profiles, required by the human resources competitiveness. In this sense, "the success rate of an investment process depends on the skill to articulate its deference's material and immaterial components. This skill is developed through a learning process, in which professional formation action plays a key role" ⁶.

Having in account the number of teenagers that quit from scholar system without finishing 9th level, the professional formation can give the chance to acquire the basic skills that are requested by the work market and it can help decreasing instability and uncertainty passing to the active life. To this population segment, "the professional formation could work as a way to have formation, through knowledge acquisition, through work world socialisation, through the immersion in the production world, obtaining in that way, knowledge, referential points or guidance to search a profession" ⁷.

When we hear so many protests that school doesn't prepare for the work market, a possible solution would be a combination of a regime, achieving a professional certification, other academics certifications and at the same way a profession and a salary. This regime become an attractive factor due to its complementarity.

PRELIMINARY RESULTS PRESENTING

This data are non-definitive because they are only 25% from the defined sample, however they allow, since now, to anticipate same reflection lines towards the data distribution.

In this way the sample structure, in which this data are based, is as follows:

⁶ Maria João Rodrigues, "A competitividade e Recursos Humanos", Ed Dom Quixote 1994, Pág 147

⁷ Angelina Carvalho, "Da escola ao mundo do trabalho" Ed Inst Inov Educ 1998, Pág 95

ACTUAL SITUATION

		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Valid		40	4,0	4,0	4,0
	9 th year	444	44,1	44,1	48,1
	12 th year	310	30,8	30,8	78,8
	Recourse Teach	37	3,7	3,7	82,5
	Centre for Professional Formation	46	4,6	4,6	87,1
	Professional Schools	128	12,7	12,7	99,8
	Employed	2	,2	,2	100,0
	Total	1007	100,0	100,0	

Regarding to the central theme of this investigation the answers obtained show the following distribution:

ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)

		<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Valid		17	1,7	1,7	1,7
	NO	619	61,5	61,5	63,2
	YES	371	36,8	36,8	100,0
	Total	1007	100,0	100,0	

Actual Situation * ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)
Crosstabulation

		ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)			Total
		NO	YES		
Actual situation	Count	239	194	11	444
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	40,4%	53,9%	68,8%	45,9%
	Count	207	99	4	310
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	35,0%	27,5%	25,0%	32,1%
	Count	23	14		37
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	3,9%	3,9%		3,8%
	Count	28	18		46
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	4,7%	5,0%		4,8%
	Count	93	34	1	128
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	15,7%	9,4%	6,3%	13,2%
	Count	1	1		2
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	,2%	,3%		,2%
	Count	591	360	16	967
	% within ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	100,0%	100,0%	100,0%	100,0%

In a first attempt to proceed to the inquiry's characterisation, in a way that we can understand, who are the ones who accept the ingress. We will give particular attention to the scholar situation, scholarship and parents profession, age and gender. In this way, the results seem to point the 9th year students as ones who are the most predisposed to ingress in volunteer and contract regime, as we can see in the next table.

Although it's not possible to attest this data coherency, neither to explain which aspects justify them, they seem to show that 9th year teenagers, in this phase of their life, don't leave the ingress to the Armed Forces hypotheses aside. If we continue verifying this data we need to study and implement the necessary measures to keep this favourable opinion about the ingress possibility.

Another important result to show is about scholar success. If, at first, we could think that the most available ones to ingress to Armed Forces volunteer regime, would be the young people protagonists of scholarship's paths marked by failure in order to follow professional paths, such fact haven't occur. Till this moment the effect of scholar failure in accepting the ingress to Armed Forces isn't statistically significant.

However, if instead of verifying school success we take in account the scholar perspectives, the ingress in the volunteer regime doesn't seem to be very compatible with long scholar trajectories. In this way, in the group of the ones who pretend to go to university, the difference between those who accept and those who don't accept the ingress, is very significant, as we can see by the following table

SCHOLAR PERSPECTIVES * ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier) Crosstabulation

			ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)		Total
			NO	YES	
SCHOLAR PERSPECTIVES	ON THE PRESENT YEAR	Count	11	9	20
		% within SCHOLAR PERSPECTIVES	55,0%	45,0%	100,0%
	CONCLUDE THE 9 th LEVEL	Count	40	34	74
		% within SCHOLAR PERSPECTIVES	54,1%	45,9%	100,0%
	CONCLUDE THE 12 th LEVEL	Count	151	133	284
		% within SCHOLAR PERSPECTIVES	53,2%	46,8%	100,0%
	GET IN THE UNIVERSITY	Count	332	143	475
		% within SCHOLAR PERSPECTIVES	69,9%	30,1%	100,0%
	DON'T HAVE ANY IDEA FORMULATED	Count	79	49	128
		% within SCHOLAR PERSPECTIVES	61,7%	38,3%	100,0%
	missing values	Count	6	3	9
		% within SCHOLAR PERSPECTIVES	66,7%	33,3%	100,0%
Total	Count	619	371	990	
	% within SCHOLAR PERSPECTIVES	62,5%	37,5%	100,0%	

Another result that is very interesting, by its unexpected nature, is about the variable gender, as we can see in the following table:

As it is possible to see in the next table, the result related with the variable gender is particularly interesting and was very much unexpected.

GENDER * ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)) Crosstabulation

		ACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)		Total	
		NO	YES		
GENDER	FEMALE	Count	311	163	474
		% within GENDER	65,6%	34,4%	100,0%
		% withinACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	54,7%	47,9%	52,1%
	MALE	Count	258	177	435
		% within GENDER	59,3%	40,7%	100,0%
		% withinACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	45,3%	52,1%	47,9%
Total	Count	569	340	909	
	% within GENDER	62,6%	37,4%	100,0%	
	% withinACCEPT INGRESS IN THE VOLUNTEER REGIME (even as a soldier)	100,0%	100,0%	100,0%	

From the ones who accept to ingress in the regime, by the gender variable, the results seems to be almost the same then we can conclude that the idea that military profession is a mainly job male, is for the inquired population not sustained.

As we have said before, another fundamental variables, to characterise the individuals who accept the ingress in volunteer regime and also to characterise the ones who don't even think about it, have to do with parents' profession and the parents' scholarship.

In this sense, the results seem to show that as parents' scholarship level and their profession social prestige increase, the less is the predisposition to ingress in contract and volunteer regime. This is not an unexpected result because having the family possibilities to support scholar paths projects continuing, less is the need to early ingress in the work market.

Regarding the teenagers who pretend to ingress in the volunteer regime, their main goals are related with peacekeeping missions participation (23.8%) and studies conclusion (20%). Concerning the professional formation courses the results confirm our theoretical explanation for the reason that in teenagers' opinion these courses aren't useful (10%)

The teenagers who don't pretend to ingress in the volunteer regime, referred the main following reasons:

DON'T LIKE THE MILITARY LIFE

	Frequency	Percent
Valid	335	33,3
Missing	672	66,7
Total	1007	100,0

DON'T PROVIDE PROFESSIONAL STABILITY

	Frequency	Percent
Valid	210	20,9
Missing	797	79,1
Total	1007	100,0

Although the motives are non-definitive, the reason for these opinions appears to be related with the structural characteristics of the proposed regime, which could possible mean that it's not a temporary rejection.

To finalise this results review, it is missing one reference to the film impact on the inquiries and the quality of the information transmitted. Then the inquiries' opinions about the film are the following ones:

OPINIONS CHANGED AFTER THE MOVIE

	Frequency	Percent	Cumulative Percent
Valid HAVE CHANGED FOR MUCH BETTER	147	14,6	15,4
HAVE CHANGED FOR BETTER	460	45,7	63,4
Valid HAVE CHANGED FOR WORST	9	,9	64,4
HAVE CHANGED FOR MUCH WORST	8	,8	65,2
DIDN'T CHANGED	333	33,1	100,0
Total	957	95,0	
Missing	50	5,0	
Total	1007	100,0	

As we can see, 45.7% had changed their opinion, and revealed the usefulness of this kind of actions. This information can be helpful to adapt better publishing campaigns.

CONCLUSION

We think that at the moment it is early to advance any conclusions since we are still completing the data introduction phase.

The provisory results that we have showed here, only allow us to predict some tendencies about the variable expression with which we are going to analyse.

In this way we can't reveal any conclusions, but we obtained an important contribute to the structure analysis that we will develop and to the strategy definition as well in order to test their coherency and explained pertinence.

At the moment we can predict that the final report will be finished on November 01.

Suzana Stefan, Sanja Bender-Horvat, Goran Tislarić: Commissioned and Non-Commissioned Officer's Attitudes on Women in the Military.

Ministry of Defence of the Republic of Croatia

Introduction

The militaries that have integrated women too proved their decision right at times when they were in war. The militaries known for successful integration of women opened their door to them in the 19th century. Croatia's Homeland War experience is another example of women volunteering to contribute to defence and not expecting privileges. Current changes at the global level imply altering of the "traditional" role of the military. In accordance with that, some militaries up to recently closed to women have begun to change their attitude too (Beckraft, 1990). Most NATO-member countries open more and more billets to women, therefore the authors find it useful in this regard to draw the attention to Croatian war experience.

A historic outline of the presence of women in Croatian militaries

Croatian history abounds in instances of women taking part in defence of their country side by side with men. This may be a result of Croatia's particular geostrategic and political position, attracting many an invader, which resulted in a continuous line of wars in its territory. The best known are legends on brave Croatian women taking part in defence from Turks, using their wits alongside with the weapons.

Women volunteered in the Homeland Defence War, not picking assignments. The data available (Sertić & Petričević, 1997) reveal 4.5% of the total manpower aged 19-77. During the War 51 women were killed, mostly as infantry units members.

Women in the Armed Forces of the Republic of Croatia today

According to the data by the Personnel Division of the Ministry of Defence (2000), women make 13.9% of the manpower, mostly in career fields. Women non-commissioned officers make 3%; some 30 women are found in the infantry units. To justify integration of women in the military is the fact on women present in the first generation of military pilots, and women candidates meeting the strict selection criteria for international military academies (Croatia has had three women attendees at the US military academies - West Point, Naval Academy and Air Force Academy. There are women at the heads of departments in the Ministry of Defence, others in the Military police, women physicians, psychologists, medical assistants and advisors in different domains. Administrative duties are extensively run by women (e.g. secretaries, ADP operators, logistics).

Legal framework of integration of women into the Armed Forces

Legal regulations (Defence Act) exclude women from recruitment and military service obligation. The obligation remains however for women aged 19-50 with education and training needed in the military to serve in the reserve component, except for pregnant women and mothers of children aged under 10, and single mothers with children under 15, as well as wives of members summoned to a military exercise at the same time. Respective norms envisage lower age limit for women in the reserve component for certain duties. E.g., in the wartime plan women aged up to 45 and men up to 50 may be assigned to duty of driver of non-combat vehicles. The Act on Armed Forces service treats men and women equally in terms of rights and obligations, except for they are not required to have completed the military term of service to join the active service.

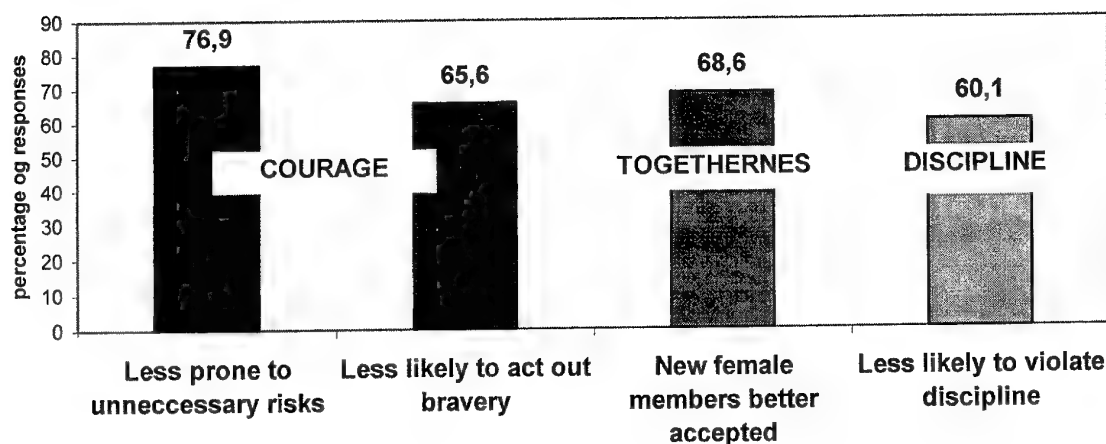
Commissioned and Non-commissioned officers' attitudes on women in the military

The poll on women in the military was conducted in 1997 among male commissioned (N=131) and male non-commissioned officers (N=273) in commanding posts in the Croatian Armed Forces. A questionnaire containing 36 statements on men-women differences in military duty performance was used. The statements were formulated based on widespread opinions regarding the differences. Half the statements were formulated positively, and the other half negatively. Responses options were "Yes", "No" and "There are no differences between men and women": The questionnaire was intended to examine 6 domains critical for military functioning:

- **Motivation**
- **Togetherness**
- **Discipline**
- **Courage**
- **Efficiency**
- **Living and working conditions in the military**

The results obtained will be analysed according to individual statements reflecting positive and negative attitude respectively. Figure 1 contains statements reflecting positive attitude by over 50% of respondents:

Figure 1. Statements yielding POSITIVE ATTITUDE to women in the military by over 50% respondents



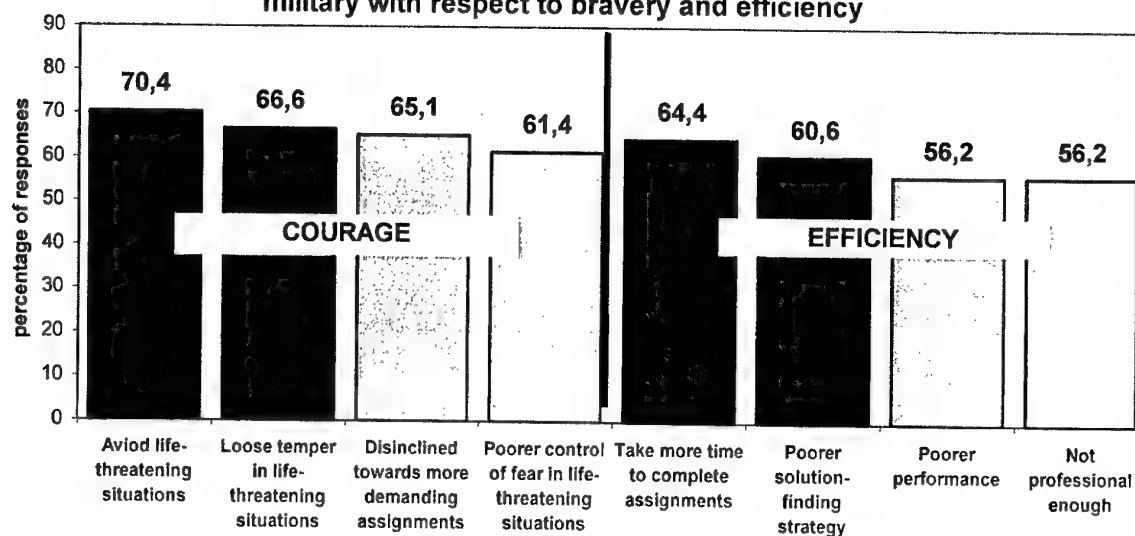
The findings of the present study agree with a series of other studies (Jessen & Moir, 1995; Miljković & Rijavec, 1996). Namely, women on average are less aggressive than men, and therefore less prone to risky situations. They are less prone to competition and to "acting brave". As for Croatian commissioned and non-commissioned officers' opinion on women "less often violation discipline", similar studies conducted in the US Armed Forces showed less unauthorised leaves (AWOLs), less alcohol abuse and general disobedience by female personnel (Hoieberg, 1991).

Statements reflecting negative attitude by over 50% of commanders polled are the following:

- Women receive milder punishment (77.6%)
- Women are punished less often (72.4%)
- Women avoid life-threatening situations more often (70.4%)
- Women "lose their temper" in life-threatening situations (66.6%)
- Women are less ready to take more demanding tasks (65.1%)
- Women need more time to finish the job (64.4%)
- Women have poorer control over fear in life-threatening situations (61.4%)
- Women are slower and poorer "problem-solvers" (60.6%)
- Women less motivated for professional development (58.6%)
- Women contribute less to togetherness (57.2%)
- Women are less professional (56.2%)
- Women have poorer working commitment (53.3%)
- Women display lesser concern for common interests (51.1%)

As noticeable, most statements reflecting negative attitude of commanders towards women in the military concern courage and efficiency. Figure 2. shows the statements on courage and efficiency of women reflecting the negative attitude.

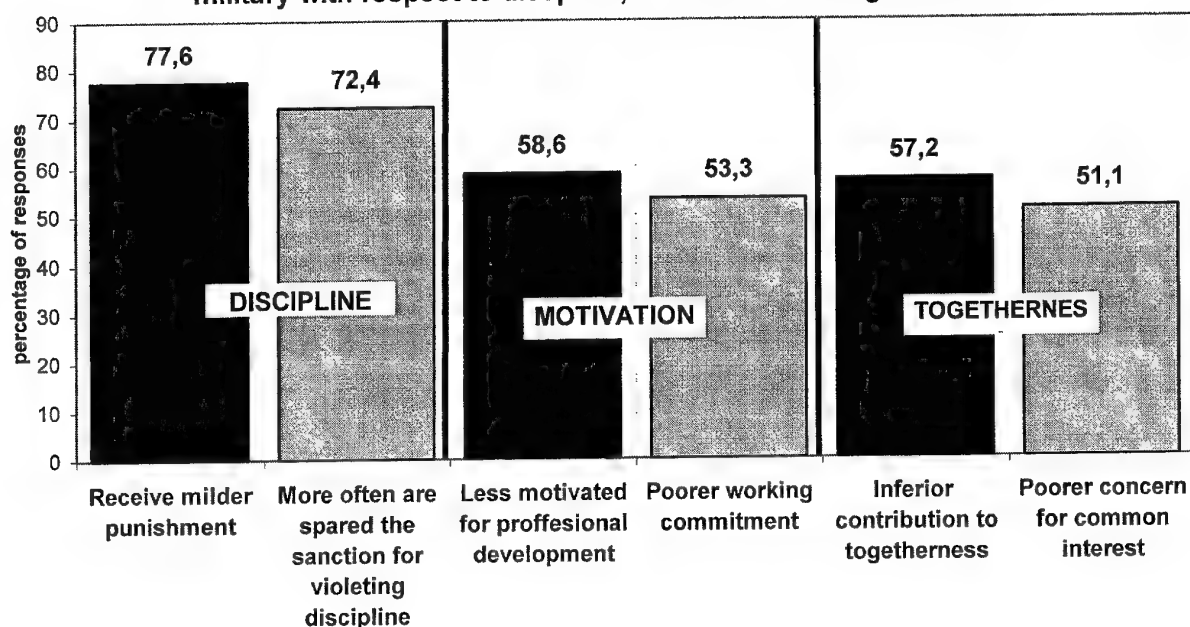
Figure 2. Statements reflecting negative attitude on women in the military with respect to bravery and efficiency



Responses to the statements concerning the relationship of women and working efficiency confirm opinions and discussions seen in other militaries too. Namely, commissioned and non-commissioned officers rate women's working efficiency poorer compared to men's. It is reflected in majority of the statements cited. It should not be overseen that many women in the military are on expert fields, administrative and support billets, which differ from the traditional commissioned and non-commissioned officer duties, which could influence their assessing women's performance as poorer.

Negative attitudes were reflected most in the two discipline-related statements. Thus, over 70% commanding officers think women receive milder punishment and that they are punished less often in the first place. Figure 3 contains the discipline-wise, motivation-wise and togetherness-wise statements reflecting negative attitude towards women in the military.

Figure 3. Statements reflecting negative attitude towards women in the military with respect to discipline, motivation and togetherness



Again, over 2/3 commissioned and non-commissioned officers think women get punished less often. This finding might reflect the stereotype on female sensitivity and emotionality as the argument for perceived need to protect them. Thus, superiors might demonstrate proneness to be gentler towards women who breach the discipline, which may impair togetherness.

Over 50% commissioned and non-commissioned officers rated women's motivated for professional development and their commitment to work inferior. However, 50% respondents reflect the view comparable to that reported in the US Army that women are given poorer opportunity for promotion compared to their male colleagues, which seems plausible explanation for inferior motivation.

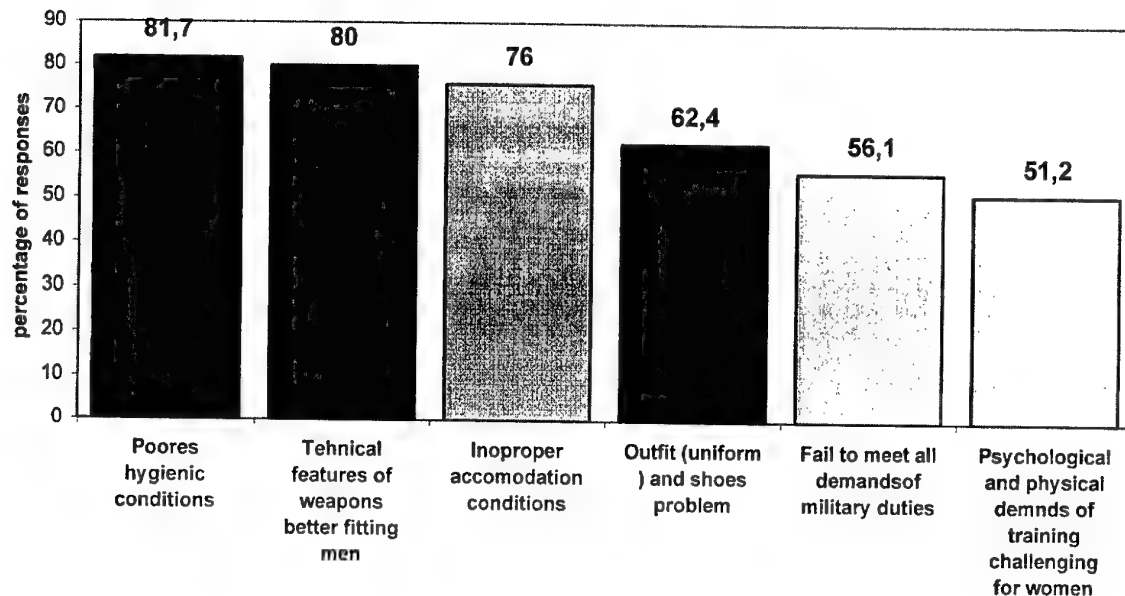
In addition, most COs and NCOs think women contribute less to togetherness and common interest. A series of studies conducted on US Ships, military academies and field operations, studies in Canada confute the alleged interference of women's presence with cohesion and togetherness among their male colleagues and overall togetherness in the unit. Still, the prejudice persists on decreased combat readiness attributed to women. This experience tested, and supported by a series of studies conducted during combat deployments reveals cohesion remain stable and unaltered by women's presence in the unit.

Gender difference may affect togetherness, but only shortly upon the arrival of a new woman member, but this is the case with each new member anyway. Cohesion, the verified notion, is but a reflection of the unit situation, i.e. an event as experienced by each of its members regardless of gender.

Women who have spent some time in the unit are not perceived through their gender any longer, but are treated as equal. Some authors underline motivation, education and intelligence (aptitude and skills) as factors of integration and affirmation of women in field units.

Most respondents saw living and working conditions improper for women (in terms of hygiene, technical features of weapons, accommodation conditions, outfit and shoes, and psychological and physical demands of training). Figure 4. schematises the statements on hygienic conditions in the military as inappropriate for women.

Figure 4. Statements reflecting negative attitude towards women in the military with respect to adjustment to living and working conditions



The biggest difficulty detected was unproper hygienic conditions (as rated by 81.7% respondents). To our knowledge, the situation is much the same in other militaries. For the rest, field conditions are hardly proper for men themselves. During the Homeland Defence War, however, women successfully faced this problem.

To ensure better accommodation conditions for women, the rule is - separated accommodation and bathing facilities. As for technical features, some weapons do require physical strength to use them, which make them less or hardly manageable to women (e.g. big calibre cannon operators).

An important fact to note is that few over 50% respondents see psychological and physical demands of training unappropriate for women. This problem could be approached by setting norms for motor preparations that would include different criteria for women, based on anthropological findings related to the area. Croatian Armed Forces have different criteria for motor tests, set based on physical characteristics of women, which however applies to common officer duties only.

Differences in COs and NCOs attitudes towards women in the military

By observing the abovementioned findings in the light of the respective respondents duties, one detects differences in attitudes between the commissioned and the non-commissioned officers. Table 1. contains statements from the domains examined which reflect statistically significant differences between COs' and NCOs attitudes:

Table 1.: DIFFERENCES IN COS AND NCOS ATTITUDES ON WOMEN IN THE MILITARY:

DOMAIN	STATEMENT Women in the military:	STATEMENT OFFICER OPINION (%)	NON-COMM OFFICER OPINION (%)	More negative attitude towards women in military
efficiency	Need less time to complete job	YES =6,9 NO =56,5 no difference =36,6	YES =6,6 NO=68,1 no difference =25,3	NCOs
	Need more time to correct spotted errors	YES =42,0 NO =9,2 no difference =48,9	YES =49,5 NO=13,9 no difference =36,6	NCOs
	Need greater supervision in working	YES =42,7 NO =12,2 no difference =45,0	YES =50,2 NO=18,7 no difference =31,1	NCOs
	Less professional	YES =48,5 NO =14,6 no difference =36,9	YES =58,6 NO=8,4 no difference =33,0	NCOs
motivation	Poorer working commitment	YES =53,1 NO =13,1 no difference =33,8	YES =53,5 NO=5,5 no difference =41,0	NCOs
	Less motivated for professional development and	YES =40,6 NO =19,5	YES =39,0 NO=32,7	COs

	<i>promotion</i>	<i>no difference</i> =39,8	<i>no difference</i> =28,3	
courage	<i>Less ready to take more demanding tasks</i>	YES =61,8 NO =3,1 <i>no difference</i> =35,1	YES =66,7 NO =7,7 <i>no difference</i> =25,6	NCOs
	<i>Poorer control of fear in life-threatening situations</i>	YES =58,5 NO =8,5 <i>nema razlike</i> =33,1	YES =63,0 NO =19,8 <i>no difference</i> =17,2	NCOs
discipline	<i>Poorer responsibility towards assignments</i>	YES =13,1 NO =38,5 <i>no difference</i> =48,5	YES =23,8 NO =38,1 <i>no difference</i> =38,1	NCOs
togetherness	<i>Communicate more openly and freely</i>	YES =30,8 NO =29,2 <i>no difference</i> =40,0	YES =28,9 NO =43,2 <i>no difference</i> =27,8	NCOs
	<i>More ready to help others</i>	YES =29,0 NO =27,5 <i>no difference</i> =43,5	YES =34,3 NO =34,3 <i>no difference</i> =31,4	NCOs
living and working conditions	<i>Hygienic conditions in the military less appropriate for women</i>	YES =87,0 NO =7,6 <i>no difference</i> =5,3	YES =79,1 NO =12,5 <i>no difference</i> =8,4	COs

The biggest differences between COs and NCOs attitudes by domains are noticeable in the **effectiveness** (differing on 4 out of 6 statements, with non-commissioned officers having on average more negative attitude). To this line of statements a statement related to motivation can be added ("Women in the military work harder than men") in terms of direction of differences in attitudes, as well as a statement in the courage domain ("Women accept complicated tasks more readily than men") and one from the discipline domain ("Women are more indolent"). These statements are, in a way, related to effectiveness. The conclusion is, therefore, that COs have a more positive attitude towards women compared to NCOs, or at least see no difference between women and men in the aspects examined by the statements. This finding is concordant with foreign research results, where a negative attitude by NCOs regarding women in the military was found too. An explanation is that NCOs have restricted prospects for promotion, and for that reason see women, especially those ranked higher, as competition and barrier to their own

careers. To support the assertion is higher concordance of NCOs opinions on the statement "Women are more motivated for promotion".

Also, more NCOs disagreed that hygienic conditions of living in the military are not proper for women. However, it should be noted that women are mostly assigned to duties in some career field or in administrative duties, which are mostly in officer responsibility, whose opinion is thus based rather on the experience with working with women, whereas NCOs attitudes may be more influenced by stereotypes.

Another psychological examination (June 1997, see Bender Horvat, Štefan, Jeličić, Jovanović, 1998) that included senior officers revealed the following:

- despite their positive experiences with women as combatants and in the battle echelon, senior officers examined think the most appropriate billets for women are in expert fields, administration, logistics and the medical service
- senior officers' opinions differ on the rank issue, although most of them hold that women members of the Armed Forces are discriminated in the ranks and decorations regard
- most senior officers examined see women competent for the duties they are mostly assigned to (and "that they are best at"). The respondents also think that gender is no criterion of competence and success, as competence is best evinced through working results. One officer sees "women prone to introduce non-military behaviours and communication thereby disrupting the chain of command and inducing emotional tension which in the military is undesirable"
- most senior officers examined think women obey discipline more than men, and see no difference between male and female members of Armed Forces in motivation and adjustment

CONCLUSIONS

The actual attitudes may open many discussions as to their justified ness. Gender prejudices still exist that influence our attitudes, and behaviour too. Gender biases are probably best noticeable in the military, especially concerning taking part in combat, which is traditionally seen as exclusively male domain. On the other hand, a social myth is being promoted on men and women as equal. Standing by either of the two extremes is counterproductive for both men and women. Therefore, for a better functioning of the society faulty attitudes should be altered, taking into consideration scientifically proved facts and actual experiences. Research findings revealed unignorable anatomic and physiological differences between the two genders, however "gender should not be the sole criterion of competence and performance", citing the words by a senior Croatian officer taking part in a 1997 opinion poll.

The technological and social advancement will require putting all existing knowledge and skills to use to be able to do the job effectively. That means "using male and female potential". Existing gender prejudices, or social myths that lack scientific proofs, may be impeding in that view and cause unnecessary inter- and intra-personal conflicts (Štefan, 1999).

NOTES:

Beckraft, C. (1990.) "Women in the Military 1980-1990.", Women s Research and Educational Institute; Washington

Bender Horvat, S. Štefan. S., Jeličić, Z. I Jovanović, S. "Žene u vojsci" u Komar, Z. i Pavlina Ž. (ur.), Vojna psihologija – Knjiga II“, pripremljeno za tisak

Hoieberg, A. (1991.) „Military Psychology and Women s Role in the Military“, u Gal, R. I Mangelsorff, A.D. (ur.) "Handbook of Military Psychology", John Wiley and Sons, Chichesters, West Sussex, England, str. 725-739

Jessen, D. I Moir, A. (1995.) "Muški spol, ženski spol", Izvori, Zagreb (u izvorniku: "Brainsex", 1992.)

Ledić, G. (1993.) "Amazonke ili gardistice, svejedno" u "Slava I mučeništvo hrvatskog vojnika", Ministarstvo obrane Republike Hrvatske, Zagreb, str. 169-172

Maning, L. I Griffith, J. E. (1998.) "Women in the Military – Where They Stand", Women s Research and Educational Institute; Washington

Miljković, D. I Rijavec, M. (1996.) "Razgovori sa zrcalom", IEP, Zagreb

Naboris, L. R. (1982.) "Women in the Army. Do they Measure Up", Military Review

Sertić, D. I Petričević, D. (1997.) "Brojčani prikaz zastupljenosti žena u Hrvatskoj vojsci tijekom Domovinskog rata", Ministarstvo obrane Republike Hrvatske, Zagreb

Štefan, S. (1999.) „Žene u vojsci“, Velebit br. 207., Tjednik Ministarstva obrane Republike Hrvatske, str 11.,

Sergey Lytaev: Augmentation-Reduction: Estimation of Perceptive Processes for Personnel Selection.

Military Medical Academy, St.Petersburg, Russia

Early in the 60s there was described a kinesthetic psychological phenomenon, named augmentation/reduction (aug/red) [5]. In such situations some examinees mostly tended to augment virtual weight of an object, and others - to reduce. The former were named "augmentors", and the latter "reducers" accordingly. Later the said phenomenon was developed in respect to other sensory modalities. This development was reflected mostly in neurophysiological researches with registration of evoked potentials in response to variation of stimulation intensity. In many experiments there was obtained a positive correlation between stimulus intensity and evoked responses amplitude, and by analogy with kinesthetic test, the former was manifested either by evoked potentials amplitude increase when intensity increased, or by amplitude decrease [1].

It was characteristic that many studies of the aug/red phenomenon were carried out in Psychiatry clinic. So, for example, in patients of schizophrenia the dominant effect is reduction, and in suffering by a depressive syndrome - augmentation was revealed. It is established, that the type of reacting reflected not only the state of a person, which is exhibited in neurophysiological reactions aug/red, but also in more mental functions [1, 2].

From the history of problem. In early 90s we obtained similar results from patients with mental pathology, that left for me and my colleagues many questions [2]. On that moment I did not know about the phenomenon aug/red. In 1991 the case has acquainted me with

professor Monakhov K. from the Moscow Institute of High Nervous Activity of the Russian Academy of Sciences. In 80s prof. Monakhov K. together with the Swedish scientists studied this phenomenon [1]. Ten years ago I together with Moscow colleagues performed a research on influence of increasing intensity photostimulations on the amplitude of the single potentials and EEG alpha - rhythm for persons passing selection in training as banking managers [6]. In bridge, these persons drove psychological testing by Cattell's, MMPI, Ayzenk's tests, and also behavioral tests for analysis of mechanisms of perception and consciousness. The correlation of the factors C and Q4 from Cattell's test with variants of the answers on increasing intensity of a photostimulation was established.

In middle 90s in period of complex investigations this approach was applied to examination of the operators of battle information posts - cadets of 5-th course of one of command naval institutions. In past year the problem has received prolongation as the analysis of service activity of the officers driving earlier our testing.

The purpose of the present report can be formulated as follows. We estimated the role of emotional processes in regulation of the structural afferentation of varying contrast by means of visual evoked potentials (VEPs) recording, investigations of Cattell factors and behavioral data from naval cadets during professional selection.

METHODS

The researches from 52 healthy men (naval cadets) in the age of 20-22 years are performed. They were inspected by Cattell's test with the purpose of definition of an emotional activity state. An estimation of emotional activity executed by two factors C (emotional stability) and Q4 (relaxation - tension), most frequently parsed in literature.

VEPs were recorded using nineteen electrodes by International 10/20 System by "Brain surveyor" computer neuromapper (Italy). For pattern reversal VEPs a black-and-white checkerboard pattern on TV screen, reversing every 1.0 second, was used. There were used three series of stimuli differing in degree of contrast of checkerboard field elements - low, medium and high.

VEPs were analysed using data of brain mapping and factor analysis. Brain maps, consisting of coloured fields, in our case, represented reflections of sizes of dipoles located between each of 19 electrodes on a scalp and a reference electrode for the space of analyzed epoch. On averaged VEPs were estimated amplitude-temporal parameters of two components - first wave N70 (with peak latency about 70 ms) and second wave N150 (peak latency about 150 ms). For selection of more informative parameters a factor analysis was used [3].

Behavioral research consisted in testing vision system by optical tachistoscopic technique, presenting images projected on the screen. The set of 32 complex geometrical Perret's figures for testing short time visual memory, independent of language abilities was used. Fragments of these figures, which when put together make complete image, after proper briefing were presented one after another to observers at interval and exposition of 500.0 ms with further search for initial figure in the table [4].

Nine images with incomplete set of signs, consisting of familiar objects [3] - key, spectacles, anchor, balance, nippers, scissors, tea-kettle, electric lamp and trumpet - were presented to examinees under conditions of time deficit (exposition from 4.0 to 3000.0 ms).

RESULTS AND THEIR DISCUSSION

The estimation of profiles by the factors C and Q4 allowed to characterize the inspected persons. The values of the factor testifying to relaxation - tension were distributed in range from 1 to 6 balls. Parameters of emotional stability laid within the limits 5-9 balls. For definition of relation of influencing of an emotional state of the person into character of the brain evoked potentials all cadets were divided on two groups. 31 cadets compounded a category of persons with high-performance tensions (4-6 balls) and 21 men had low estimations of the given parameter (1-3 balls). It is necessary to mark, that higher estimations (4-6) of factors Q4 corresponded to lower values of balls of the factor C (5-6). Vice-versa, to low estimations of tension (1-3) there corresponded high values of emotional stability (7-9).

Dependence on an emotional state are established of definite dynamics in development VEPs during amplification of contrast of a chess field. In essence it looks so, that in one case the amplification of contrast is accompanied by directly proportional relation of amplitude VEPs, that is its increase. Opposite variant is possible also, when the increase of contrast pattern afferentation is accompanied by return proportional relation of the VEP amplitude.

The average values of VEPs amplitudes in the applicable groups mirror some features of dynamics of components N70 and N150. Characteristically, that in both cases the spatial parameters N70 a little bit differ from each other. Thus, the minimum values of amplitudes are marked in a period of exposure of the least contrast chess field. The increase of a degree of contrast is accompanied for all test by increase of amplitude N70. The likeness of spatial changes of a wave N70 in both groups attracts the attention also. The maximum ratings of amplitudes are marked in occipito-parietal areas of the cortex. Maximum ratings of the factors of amplitudes here are watched also, that testifies to a low dispersion of these parameters. A dispersion of values of amplitudes of frontal sites was presented, specially, in cadet's group with low balls of the factor Q4 higher (low numbers of the factors). Besides in these cortex areas in the given group the increase of amplitude N70 is marked at effect of a mean degree of contrast as contrasted to maximum.

More significant differences among studied groups are marked in values of a wave amplitude N150. If for persons with high values of the factor Q4 the direct relation between a degree of contrast of a chess field and value of amplitude N150 is tracked, for opposite group test the expressed inverse of the answers is marked. Characteristically, that for these persons (with low balls of the factor Q4) in reply to pattern's stimulation with high contrast in occipito-parietal areas the minimum values of amplitudes N150 are watched. In turn in these areas the minimum - contrast stimulation evoke the most expressed wave N150 with noticeable dominance of amplitude in right hemisphere. During middle-contrast patterns N150 takes an intermediate position. At the same time in frontal cortex region the amplitude of this wave becomes maximum. Characteristically, that as a whole in both groups of value of amplitude N150 are more stable in frontal cortex, to what higher values of the factors testify.

Behavioral data of tachistoscopic test compared by groups made on the basis Cattell's test and VEPs from checkerboard contrast changing. In the second group (red) the recognition of the Perret's figures consequent parts was 89 per cent, whereas in the first group (aug) the number of correct answers was significantly lower ($P < 0.05$) - 71 per cent. Resembling correlations between groups during recognition of images with incomplete set of signs were observed also. Under conditions of low test exposition (4.0 - 30.0 ms) differences of the results between groups were more meaningful. In the first group (aug) per cent of recognition was

lower, than in the second one. Increase of time of test images exposition was followed by increase of number of correct answers, and the differences between groups are absent.

Thus, in principle, emotional activity state is the base for forming one of two types of VEPs responses. Persons with high balls of emotional tension were characterized by direct relationship between contrast and VEPs amplitude. In the second case, from persons with low balls of emotional tension, initially there was VEPs amplitude increase, but later on the relationship became the reverse one, manifested by marked decrease of the amplitude.

It becomes apparent also that efficiency of functioning of specific mechanisms of sensory recognition - invariant evaluation of signals, short-time visual memory, spatial analysis and synthesis - is in certain relation with neurophysiological characteristics of perception. Comparison of behavioral investigation results with neurophysiological data enabled to find that the first variant of reaction was characterized by lower degree of visual images recognition, under condition hampering their identification, irrespective of test objects modality.

CONCLUSION

1. Within 5 years numbers have left of the Navy from group AUG - 14 persons (45 %), from group RED - 5 persons (24 %).

2. Phenomenon AUG/RED have connection with emotional state and mechanisms of sensory recognition - invariant estimation of signals, short-time visual memory, spatial analysis and synthesis.

3. The adaptivity mechanism of response to contrast increase, manifested by VEPs amplitude reduction, probably, tells about reduction of biological meaningfulness of the given informative stimulant. On the contrary, absence of switching adaptivity mechanism, probably, is a reflection of more inert processes of brain, the latter being indicated also by rise of images sensory identification threshold.

4. Operation a central nervous system by mechanism of a reduction more effective in conditions hampering recognition.

5. The estimation of the adaptive mechanism AUG/RED is significant at professional selection of the specialists - operators.

REFERENCES

1. KNORRING Von L., MONAKHOV K.K., PERRIS C. Switching adaptive mechanism for regulation of signals coming into central nervous system. *Human Physiol.* 7, 784-795. 1981.
2. LYTAEV S.A., SHOSTAK V.I. Dependence of perceptual functions on brain neurodynamics at the structural afferentation intensity variation. *Sensory Systems.* 7, 65-75. 1993.
3. LYTAEV S., SHEVCHENKO S. VEPs and AEPs Mapping of Occlusive Lesions in Cerebral Vessels. *Ann. NY Acad.Sci., NY, NY Acad.Press.* 821, 524-528. 1997.
4. PERRET E. *Gehirn und Verhalten. Neuropsychologie des Menschen.* Bern, Stuttgart, Wien, Huber, 1973.
5. PETRIE A. *Individuality in pain and suffering.* Univ. of Chicago Press, Chicago, 1967.
6. YAKOVENKO I.A., TCHEREMOUSHKIN E.A., LYTAEV S.A. Reflecting the augmenting - reducing phenomenon in the spatio-temporal EEG characteristics. *J. Higher.Nerv. Act.* 44, 25-32. 1994.

Hans Jetten: Pressure of Deployment and Turnover among Military Personnel.*Netherlands***Introduction**

In the year 2000, four questions on missions abroad were included in the PRISMA questionnaire. The main reason for this is for us to be able to monitor the pressure of missions abroad. This report presents the results of these four questions and explains the relationship between pressure of deployment and a number of other variables. Whenever possible, the results from 2000 will be compared to results from previous surveys (1993 and 1999).

Results

A total of 2,478 military personnel with indefinite contracts were questioned in telephone surveys. These surveys took place between 10 January and 26 November 2000. First the results per question will be presented for the whole group of military personnel with indefinite contracts. After this general overview, the main differences will be indicated between a number of distinguished categories.

- a. Have you been sent on a mission abroad in the last five years?

	1999	2000
	9	
Yes	38%	43%
No	62%	57%

- b. Do you think that compared to other military personnel the probability that you will be deployed is at present greater, the same or less?

	1993	1999	2000
Greater	25%	23%	23%
Same	32%	40%	42%
Less	41%	34%	35%
Don't know	2%	3%	3%

- c. Do you experience pressure of deployment?

	1999	2000
Never	54%	55%
Seldom	15%	15%
Sometime	18%	19%
s		
Often	7%	8%
Always	5%	4%

d. Does your partner experience pressure of deployment?

	1999	2000
Never	36%	40%
Seldom	15%	13%
Sometime	30%	26%
s		
Often	12%	14%
Always	8%	8%

The following background characteristics were considered to determine whether they made a difference in the answers:

having been sent on a mission abroad before

rank

age

sector

HAVING BEEN SENT ON A MISSION ABROAD BEFORE

The following tables show the results distinguishing between those who have and those who have not been sent on missions abroad in the last five years.

e. Do you think that compared to other military personnel the probability that you will be sent abroad is at present greater, the same or less?

	Been deployed	Not been deployed
Greater	31%	16%
Same	41%	44%
Less	28%	40%

It seems extraordinary that those who have been sent on missions before have indicated that they are more likely to be sent again. However, this is explained by the fact that a large number of personnel that were sent on missions abroad were attached to the GNC and they are the most likely to be sent again.

This disproportionate division of missions abroad is perceived as unfair by those who have been sent on missions abroad before. This can have negative consequences for the organisation (such as premature outflow). The fact that personnel perceive the division as unfair can be concluded from the results of the question put to them in 1999 as to whether military personnel who are best suited for the job should be sent on missions abroad or whether everyone should take his or her turn. The results are shown in the table below. The vast majority thinks everyone should take his or her turn.

f. statement about missions abroad (1999)

	Been deployed	Not been deployed
The most suitable military personnel should be sent on missions abroad.	11%	17%
All military personnel should be sent in turn.	89%	84%

The partners of personnel who have been on missions abroad before experience greater pressure, as can be seen from the table below.

g. Does your partner experience pressure of deployment?

	Been deployed	Not been deployed
Never/seldom	39%	61%
Sometimes	30%	25%
Often	19%	9%
Always	12%	5%

RANK

Four groups are distinguished, two NCO groups and two officer groups: the sergeants and sergeants class 1 group, the sergeant majors and warrant officers group, the junior officers group (captain and lower) and the senior officers group.

Have you been sent on a mission abroad in the last 5 years?

	1999	2000
Sergeants/sergeants class 1	44%	53%
Sergeant majors/warrant officers	33%	37%
junior officers	48%	41%
senior officers	43%	43%

i. Does your partner experience pressure of missions abroad?

	never	Seldom	sometimes	often	always
Sergeants/sergeants class 1	37%	13%	27%	15%	8%
Sergeant majors/warrant officers	43%	12%	24%	13%	8%
junior officers	37%	13%	27%	15%	9%
senior officers	39%	17%	26%	12%	6%

If we distinguish between personnel who have and have not been on missions abroad before, the results for this table are as follows.

j. Does your partner experience pressure of missions abroad (distinguishing between groups who have or have not been sent before)?

	Not been deployed		Been deployed	
	often	Always	often	always
Sergeants/sergeants class 1	9%	3%	21%	12%
Sergeant majors/warrant officers	7%	6%	17%	12%
junior officers	10%	7%	21%	15%
senior officers	10%	4%	18%	10%

AGE

Four age categories are distinguished:

30 and under, 31-40, 41-46 and 47 and over

There are clear differences between these groups. The number of people indicating that they have been sent on a mission abroad in the last five years ranges from 60% in the youngest group to only 30% in the oldest group. There are also clear differences between the age groups in the other questions.

k. Do you think that compared to other military personnel the probability that you will be sent abroad is at present greater, the same or less?

	More likely to be deployed
aged 30 and under	37%
aged 31-40	28%
aged 41-46	22%
aged 47 and over	13%

Younger people experience more pressure of missions abroad and indicate that their partners do also.

As can be expected, those who indicate that they are likely to be sent on missions abroad are also more likely to experience pressure of missions abroad.

p. Relationship between the expected probability of being sent on missions abroad and experienced pressure of missions abroad

pressure experienced	never/ seldom	sometim es	often/ always
greater probability	51%	23%	26%
same probability	70%	21%	9%
less probability	82%	12%	5%

OUTFLOW

The standard PRISMA questionnaire includes questions about outflow plans. Considering a job outside the Defence organisation and actually applying for a job outside the Defence organisation are outflow indicators. In 2000, a question was added as to whether personnel still expect to be working for the Royal Netherlands Army (RNLA) in three years' time.

The results show that there is a very strong relationship between pressure of missions abroad experienced by personnel (or their partners) and outflow intentions. This is in contrast to the results from 1999, when no differences were found in the outflow intentions. The diagram below shows the percentage of military personnel with indefinite contracts that is **considering** (yes/no) a job outside the RNLA, against the extent of the pressure of missions abroad experienced.

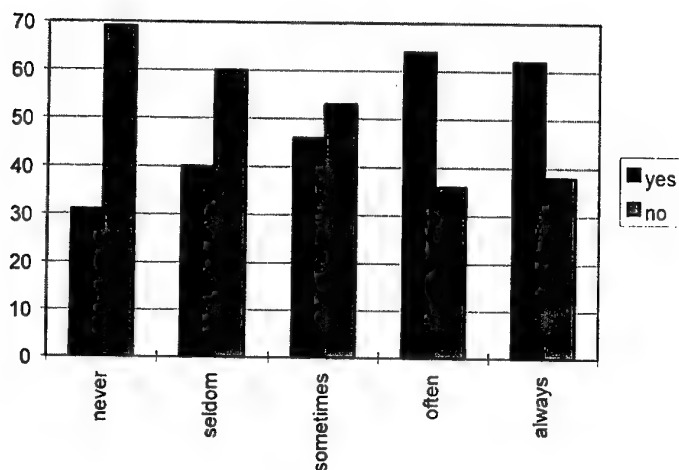


Diagram 1: Percentage of personnel considering applying for a job outside the Defence organisation against the extent of the pressure of missions abroad experienced

Diagram 2 shows the percentage of military personnel that have actually applied (yes/no) for a job outside the Defence organisation. As it is mainly the group of personnel under 40 years of age that applies for other jobs, the job application activity is shown specifically for this age category against the pressure of deployment experienced.

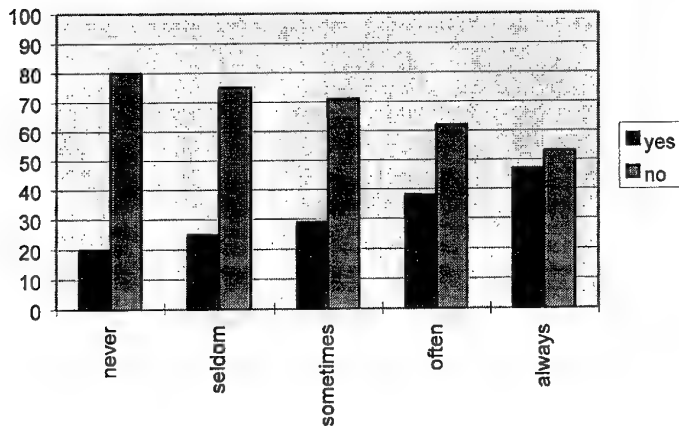


Diagram 2: Percentage of personnel that has applied for a job outside the Defence organisation against the extent of pressure of missions abroad experienced (group aged under 40)

The final item considered was the influence of the other factors assessed in PRISMA (such as job satisfaction, work pressure), in combination with the pressure of missions abroad experienced, on the outflow intentions. Based on three questions on job application intentions, a new variable has been made ($\alpha=0.74$), indicating the extent of retention in five categories. The analysis was carried out on the group of military personnel aged 40 and under. The factors that influence personnel to stay most are:

satisfaction regarding career opportunities;

satisfaction regarding the way in which they are treated by the RNLA;

the extent of the pressure of missions abroad experienced by their partners.

These three factors determine the outflow intentions to a great extent (stepwise regression; $R^2=0.25$).

Conclusions

22% of the partners often or always experience pressure of deployment (according to the military personnel), against 12% of personnel themselves. Military personnel with the GNC and their partners experience significantly more pressure of deployment (19% and 31% respectively) than the rest.

Those who have been sent on missions abroad before indicate that they are **more likely** to be sent again. This disproportionate division is perceived as unfair. This can result in personnel leaving the organisation prematurely.

Of the younger personnel (< 30), 60% have been sent on missions abroad in the last five years, against only 30% of the oldest group.

There is a strong relationship between the pressure of deployment experienced by personnel (or partners) and outflow intentions. Twice as many military personnel with indefinite contracts

(aged 40 and under) experiencing high pressure of deployment apply for other jobs compared to those experiencing low pressure of missions abroad.

The issues from PRISMA that mainly determine the outflow intentions are:
satisfaction regarding career opportunities;
satisfaction regarding the way in which personnel are treated by the RNLA;
the extent of the pressure of deployment experienced by their partners.

Jacques Mylle: Perceived Team Efficacy in Peace Support Operations.

Department of Psychology, Royal Military Academy Brussels – Belgium

Team behaviour became a scientific subject matter after World War II, studied especially by social psychologists. Well known, for example, is Bales' seminal work, reported in his book: *Interaction Process Analysis* (1950).

Until recently – around 1990 – internal aspects of the group were in the focus of attention; for example, group cohesion, communication and the like. Even efficacy was seen as a result of parameters internal to the group. But since about a ten years the focus of attention shifted towards an external perspective; this means that the influence of the environment on the behaviour of the team as a whole is taken into account. In this sense, the formula of Lewin still holds: $B=f(P,S)$ becomes $B=f(T,S)$.

Here, a team is defined as a small group of individuals who are considered as and who consider themselves as a *social entity*, which is characterised by a mutual dependency in performing a group task. Moreover, a team is embedded in a larger *social system*. Thus, what the group or one of its members is doing, has an impact on a social entity external to the team.

One could think that there is a clear-cut boundary between the team and its environment, and hence between the internal perspective and the external perspective; this is not the case. In fact, the boundary can be seen as a grey zone within which the team establishes its contacts with the environment and in which it is not clear if it belongs to sphere of influence of the team or if the team needs an authorisation of its superior to take action.

This constitutes a particular problem in studying efficacy: to what degree the team is free to decide to react to the situation; in other words, what is the degree of autonomy of the team. Seen from the side of the leader, the question becomes: "*to what extent do I delegate to subordinates?*"

Intuitively it seems clear that, in quickly evolving situations, called turbulent situations, efficacy is determined by the degree of autonomy. Related to this subject matter, notions as autonomous groups, self-directing groups or empowered groups appear.

It goes without saying that teams are omnipresent in a military organisation; for example, a tank or aircraft crew, a battalion staff, the surgeons with the nurses in an operating room are all instances of a team. Furthermore, military operations – whether classic warfare or peace support operations – are clearly turbulent situations. Especially in PSO, where the distances in the field between leader and subordinates at the one side and between teams at the other side, are often so

large that a high level of autonomy is required to react in an appropriate way to the situation at hand.

The central question of our research becomes: *how efficient are military teams in peace support operations depending on the degree of autonomy they have in a given turbulent environment and their boundary management?*

In short:

$$E = f(\text{Autonomy, Boundary management} | \text{Turbulence})$$

The model

Several facets of team functioning, described in the literature of the external perspective and that are relevant for the problem at hand, are integrated in the model below⁸ (Figure 1).

The *environmental turbulence* is considered at three levels 1) job related and task related turbulence, 2) intra-organisational turbulence, and 3) extra-organisational turbulence.

Boundary management refers to the ways how the team interacts with the environment.

Everything else being kept constant, the *team* is characterised by its *autonomy*. The outcome in terms of *efficacy* is evaluated at the level of: 1) the output or the *product*, 2) the way the team behaves or the *procedures*, and 3) the relations between the team members or the *process*.

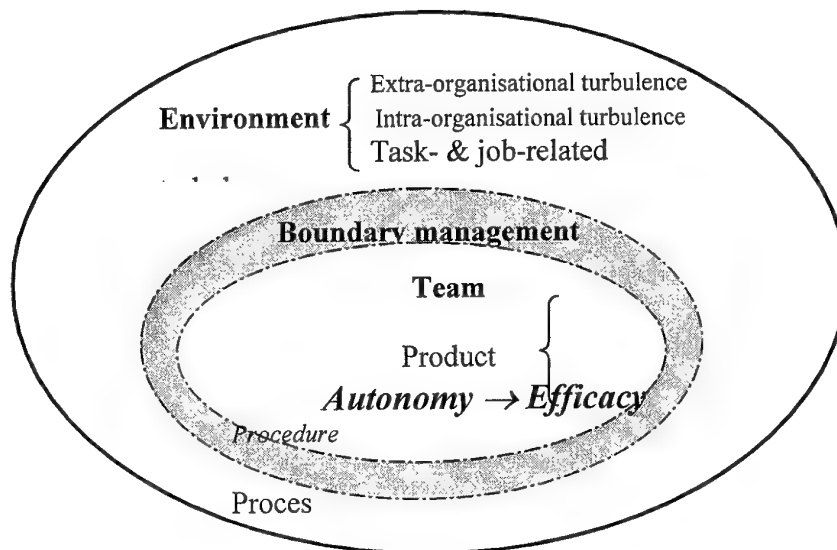


Figure 1. The model for efficacy of teams in a turbulent situation, depending on their autonomy.

⁸ This model has been worked out by Julie Callaert in her master's degree thesis (2001), Faculty of Psychology, Catholic University of Leuven (Belgium)

METHOD

The instrument

A questionnaire has been elaborated⁹, on the basis of the model described above and is composed of five parts; four parts reflecting each of the variables (environmental turbulence, boundary management, autonomy, efficacy) and one part with socio-demographic information. Each part contains a number of subscales.

1. Task related turbulence deals with internal and external interdependency (knowledge, material, time), task complexity and instability (unpredictable technical problems). At the intra-organisational level we consider organisational complexity (responsibilities, procedures and communication structures), logistic complexity and instability (planned and unplanned changes) plus a number of organisational constraints (importance attached to teamwork, leader behaviour, personnel politic, social support, co-ordination). Parameters of the extra-organisational turbulence are unclear context, strategic changes, pressure of competition.
 2. The part concerning boundary management consists of three parts. Part one has three subscales (Ancona, 1993): "scout activity" (exploring the environment), "ambassador activity" (inward buffering the team and outward representing the team) and task co-ordination. The second part deals with external communication and the third part with the reasons why people external to the team contact them.
 3. Autonomy is defined on the base of two dimensions: the time frame (impact of the behaviour in short, middle or long term) and the kind of tasks (tactical, technical, administrative).
 4. Efficacy is evaluated at the level of the product (quantity and quality), the procedures (goal setting, roles, information) and the process (openness, participation, cohesion), plus the "viability" (possibility still to exist in the future) and external co-ordination.
- Some examples are listed in Table 1 below.

Table 1. Instances_ of items for each variable.

<u>Environment</u>	
Task related	<i>I cannot proceed without information or material stemming from other team members</i>
Intra-Organisation	<i>The structure of our unit make it difficult to have an overview over who is responsible for what</i>
Extra-organisation	<i>The people we are working for change often</i>
<u>Boundary management</u>	
Outward	<i>We have to co-ordinate our activities with those of other groups</i>
Inward	<i>We have to protect our team against influences from outside</i>
<u>Autonomy</u>	
procedure	<i>We determine the order in which the different tasks have to be performed</i>
workload	<i>We decide if we make more hours than planned</i>
<u>Efficacy</u>	
product	<i>The quality of our work is.. [1]bad, [2]....[3]average,...[4] good</i>
procedure	<i>We are efficient in translating our mission into operational tasks</i>

⁹ The questionnaire of Julie Callaert, written for profit organisations, has been adapted by myself for the military population.

process	<i>We tell each other how we feel</i>
viability	<i>Everybody is motivated to continue with this team</i>
external co-ordination	<i>Our team takes care of knowing what going on in the battalion</i>

Each item is formulated as a statement. The respondent has to mark a score on a five-point scale going from not applicable but possible (1) to fully applicable (5), or from bad (1) to very good (5). We added an extra box with "not applicable because impossible in my unit or even in the Armed Forces". The latter was necessary to keep the parallelism between the version of the questionnaire to be submitted to civilians and the version to be submitted to soldiers.

The socio-demographic part asks for: gender, age, rank, number of year in the team, experience with PSO, composition of the team with respect to gender, type of the team and unit the team belongs to.

Table 2 summarises the composition of the scales and the subscales.

Table 2. The variables of the models with the according subscales and the number of items.

Variable	Subscale	Subsubscale	Number of items
Environment	Task & job related turbulence	Internal interdependency	5
		External interdependency	5
		Complexity	4
		Instability	2
	Intra-organisational turbulence	Organisational complexity	4
		Logistic complexity	8
		Instability	7
		Constraints	12
		Management support	2
		Social support	3
		Leaders behaviour	2
		Co-ordination	2
		Politic of personnel	3
		Pressure/competition	2
		Instability	8
	Extra-organisational turbulence		
Boundary management	Ambassador-scout-co-ordinator		25
	External communication		9
	Motives of external people		10
Autonomy	Personnel		5
	Procedures		4
	Responsibilities		2
	Goal setting		5
	Control		2
	Communication		4
	Evaluation		3
	Education		2
	Rewarding		1
	Equipment		4
	Workload		6

Efficacy	Product	12
	Procedures	10
	Process	11
	Viability	2
	Co-ordination	4

Subjects

Data concerning "before deployment" have been collected end of March 2001 after an intense training period 14 days before deployment in a sample of about 200 soldiers¹⁰ out of 800. They belong to the task force Belukos VI, which is deployed, from the beginning of April 2001 until the beginning of August 2001 in Kosovo.

The sample is composed of 96% men. Female soldiers are underrepresented as compared to the average in the armed forces but here it is due to the fact that the large majority of the sample is composed of combat troops. Two third of the sample is between 20 and 30 years old and one quarter between 31 and 40. In other words, 90% of the sample is younger than 40 years. Good 70% belong to the mechanised infantry, 14% to the armoured troops, 5% to engineers and 9% to the medical service. The distribution according to the rank is 73% soldiers and corporals, 24% NCO's and 2.4% Officers. The seniority in the team varies from less than one month to 20 years; 30% is less than one year member of the team, 47% between one and five years and 23% more than five years. Experience with PSO goes from none for 34%, over once for 28% to more than one tour of duty for 38%. All teams have a majority of male members.

Procedure

We are conducting the study, together with a colleague of the Catholic University of Leuven, aiming at measuring the team efficacy in PSO *as perceived by the members* of the team deployed. This study is intended as both a longitudinal study, measuring the perceived efficacy *before, during and at the end* of the mission and as a cross-sectional study allowing comparisons between several types of units deployed.

Furthermore, the same questionnaire has been submitted to teams of several civilian enterprises allowing for a comparison between the civilian and the military world.

At a moment, convenient for the units concerned, we went personally to each of the units. Respondents were grouped in a room. After having presented our selves and sketched the context of our "visit", the questionnaires were distributed and the instructions given orally. The time needed to answer the 178 items varied from about 30 minutes to nearby one hour.

RESULTS

1. Descriptive statistics

The average turbulence in the environment is estimated at 3.09 and is thus "more or less" present. At the intra-organisational level things are experienced to be more or less stable (2.88)

¹⁰ The filled questionnaires of the logistic unit (n=25) arrived on 18 May and are not included in the results below.

but the tasks contain a lot of unpredictable aspects (3.55) just as the extra-organisational environment (3.05).

The practise of conscious boundary management is below average with 2.44. Especially the "outward" relation seems to pose problems (2.65) just as the perceived motives of the outgroups to contact the team (2.70)

The degree of autonomy is evaluated at 2.38 only. The lowest score is for "rewarding" (1.2). It might be that most of the respondents taught in financial terms; in this sense, it is clear that one has almost no influence on it. In the second place subjects feel that they have too few influence on educational needs (1.84) and in the composition of the team (2.04). They feel having not enough impact on the workload (2.07) nor on goal setting (2.4). It is not surprising neither that their freedom with procedures is restricted (2.5). Only "control" scores average (3.0) with respect to autonomy.

Finally, the perceived efficacy is on average 3.28 ($\pm .55$); thus, in general people feel relatively efficient. This holds in the first place for procedures (3.43), in the second place for the interpersonal relations (3.38), and in the third place for the product (3.28). They believe that the team will "survive" in the future (3.14). They believe to be efficient also with respect to the accommodation to external constraints.

It must be stressed that it is difficult to interpret these figures given that the questionnaire is used for the first time. For example, is 3.4 in efficacy a "good" result or is it only "average" because common? In other words, there is still a lot of work to do on the validation of the questionnaire.

2. Differential effects of socio-demographic parameters.

Significant differences exist between some subgroups for some subscales but not for all subgroups for the same subscales. For example the perception of men and women is different for task turbulence, just as it is for the different ranks but this is not the case according to the type of unit or experience with PSO.

We have to figure out in the near future what the meaning of these differences may be.

3. Testing the hypothesis.

We tested our hypothesis by a multiple linear stepwise regression. The variable entered first in the model is autonomy with a standardised regression weight of $\beta = .53$ resulting in a proportion of explained variance $R^2 = .28$. The second variable entered in the model is boundary management. The regression weights are now .46 and .18 respectively for autonomy and boundary management. Finally, the environmental turbulence is added. The respective contributions are now autonomy (.45), boundary management (.19) and turbulence (-.17), resulting in $R^2 = .34$. The contribution of all three the variables is highly significant ($p < 0.007$). This result has to be considered with caution because we did not check yet the constraints of using multiple linear regression (such as normality of the distributions, linearity of the relationship and collinearity of the predictors).

CONCLUSIONS

It is necessary to take the internal perspective as well as the external perspective into account when studying team behaviour.

Although it is possible to distinguish several facets within each variable, most of them correlate significantly (within the variable). Stated otherwise, people behave in a consistent way regarding the different facets of the environment, of their boundary management and of their autonomy, resulting in a consistent effective and efficient behaviour on the level of the product, the procedure and the process. It guarantees the "survival" of the team, internally and externally.

Finally, our hypothesis seems verified: the less turbulence in the environment, the more autonomy the soldiers have and the better their boundary management is, the more efficient they behave.

It must be stressed that these results are only a first attempt to gain insight into the structure and the importance of the variables and their facets.

In the near future our attention will focus on the validation of the scales and subscales, establishing norms taking group differences into account where necessary, and considering alternate models using other techniques, such as path analysis. For example it might be that the turbulence in a given situation "dictates" a certain autonomy, which allows for a range of possibilities in boundary management. Each of these variables can contribute by itself and through others to the efficacy of the team behaviour.

Helmut Slop: Military Psychology at the Austrian International Peace Support Command.

Austrian International Peace Support Command

Introduction

The demands on the Austrian Military Psychology in the field of Peace Support Operations (PSO) have increased in quantity as well as in quality during the past years. In addition to the psychological selection procedure, which exists since the early 80's, this field contains an adequate psychological training and preparation for PSO but also the accompanying psychological care-giving for soldiers during as well as after the end of their mission. If necessary, e.g. in case of posttraumatic stress disorder, clinical psychological treatment is provided.

The Austrian International Peace Support Command (AIPSC)

The Austrian International Peace Support Command (AIPSC) is the organisational body of the Austrian Armed Forces to provide for international and multinational tasks, especially for the preparation, implementation and follow-up activities of peace support operations (PSO). The

AIPSC is the home base, command and control centre for all contingents and individuals abroad, training centre for PSO and since Sept 1999 PfP-training centre and the centre for verification and CIMIC tasks.

Organisation of Military Psychology in the AIPSC

The AIPSC consists of several divisions structured similar to the command of a brigade. One part of the planning division is the psychology section. In this section there are three psychologists and one NCO. In the responsibility of the psychology section fall three tasks: 1) Psychological Selection, 2) Psychological Training and 3) Psychological Care-giving for PSO. The chief psychologist assisted by his NCO is responsible for the psychological training and welfare, the others two psychologists are responsible for the psychological selection.

At least since the UNPROFOR mission in former Yugoslavia a large number of results of international research confirm the enormous importance of psychological measures before, during and after peace support operations.

This contribution gives a short overview of the psychological measures of the Austrian International Peace Support Command for peace support operations (PSO) of the Austrian Armed Forces.

Pre-mission measures

The Psychological Selection

The necessity of a psychological selection procedure for PSO results from the first experiences of the Austrian Army with „problematic personalities“ in UN-peacekeeping missions in the late 70's. In 1978 a serious incident happened in the Austrian contingent on the Golan Heights, when a soldier killed two of his sleeping comrades.

As result of this incident the Austrian Military Psychology Service was instructed to draw up methods to test PSO staff. This was the beginning of the psychological selection procedure for PSO.

The aim of this selection procedure is to eliminate soldiers who might endanger either themselves or others during deployment, particularly because of a lack of stress resistance. Therefore all Austrian volunteers for PSO, rank and file, professional soldiers as well as members of the reserve, are tested three days for their medical, physical and psychological fitness. This equal treatment promotes the motivation and identification with the selection and the acceptance of the testing methods with both groups.

Soldiers on PSO missions are on duty 24 hours a day, separated from their familiar environment and families, sometimes confronted with very stressful living and working conditions. All this last at least several months and at the same time they are aware of the fact of having little or no chance to go back home soon. The soldiers do not only need to have special military skills, the living together in close companionship during deployment, e.g. at observation points (OP), requires particularly a lot of personal maturity and tolerance.

With the psychological selection procedure soldiers are tested for their ability to perform their duties under the often stress generating conditions of the mission area, to integrate successfully into a military community and not to be a potential danger to themselves or to others.

Each candidate is assessed on four psychological criteria: Intelligence including its social dimension; accuracy and concentration (neutral and under stress); stress resistance (particularly tendencies towards aggression and anxiety); the ability for social integration (especially teamwork and motivation).

With regard to these four categories we use the following methods: tests for measuring abstract and verbal intelligence; live event inventories; personality inventories; projective tests; tests measuring work performance and concentration; testing under variable stress; a procedure based on group dynamic processes under stress, called "shelter test"; behaviour monitoring and a psychological interview.

Possible reasons for rejecting candidates may be: grave deficiencies concerning the personality structure; poor results in the achievement tests; inconvenient circumstances, which would have a negative effect on the stress resistance and would make the deployment not successful (e.g. partnership problems; present pregnancy of the partner without safety net of social benefits); past or present conflicts with law and violations of rules (e.g. suspension of the driving licence because of alcohol abuse); lack of maturity (too young and inexperienced candidates).

The psychological selection procedure for PSO still guarantees to keep the number of critical incidents or serious problem cases of soldiers in PSO to a minimum. This in view of the fact, that up to now more than 43.000 Austrian soldiers have participated in peace keeping and peace support operations over the last three decades.

Finally it represents a helpful and indispensable instrument of personal selection for PSO, not the least because there is still a shortage of psychological staff for an adequate psychological care system before, during and after missions. A positive exception is the Austrian Contingent in Kosovo (AUCON/KFOR) where since December 1999 a psychologist is integrated in the staff.

Psychological leadership-training for commanders

In the course of the international peace keeping missions (e.g. SOMALIA, CAMBODIA, BOSNIA, RWANDA) of the past years in several cases soldiers showed acute or delayed stress reactions caused by traumatising experiences e.g. the confrontation with atrocities and assassinations, hostage-taking and captivity, torturing etc.

The findings clearly confirm the urgency of an extensive psychological preparation and training especially for the commanding officers and NCOs, to give them skills and methods to handle such abnormal situations successfully.

In co-operation with officers with special leadership training the psychology section organises for each mission-rotation a three-day seminar for all commanding officers and NCO's. They are trained in leadership-skills and are also informed about the characteristics of the mission, including the special psychological aspects.

By means of group tasks, discussions, instructions, video films and video recordings the participants are confronted with the topics of deployment stress, potential stress reactions, measures of stress management before, during and after critical incidents (Critical Incident Stress

Management), dealing with injury, mutilation and death, expectancies and apprehensions concerning the integration phase in the operational area, the characteristics required of a leader. During eight rotations a year approximately 280 commanding officers and NCOs are trained at the beginning of their pre-deployment training in the psychology section of the AIPSC.

Psychological pre-mission preparation for the troops

Beside the leadership training for the commanders there is psychological preparation for all other ranks too. During their pre-deployment training approximately 800 soldiers a year are instructed by the psychologist of the AIPSC in the same fields as mentioned above within several hours of instruction.

Measures during the mission

Psychological support and care-giving

Although the Austrian Armed Forces traditionally participate in peacekeeping and peace support operations for now more than three decades, Austrian military psychologists were integrated in peace support operations for the first time in 1999. The first mission, where this happened, was ATHUM/ALBA, a humanitarian mission in ALBANIA, where approximately 500 Austrian soldiers built a field hospital and a camp for 5000 refugees.

Two psychologists of the Austrian Military Psychology Service were included in the contingent for the complete four months of the mission.

This measure earned a lot of agreement from the troops as well as from the Austrian Ministry of Defence and led to the deployment of two psychologists in the organisation of the Austrian Contingent in KOSOVO (AUCON/KFOR), the present main PSO of the Austrian Armed Forces in KOSOVO, where since December 1999 male and female psychologists are on duty for six months at a time.

Unfortunately there is still not enough psychological staff for an adequate psychological care system before, during and after the end of a mission. That's the reason why at the beginning of this mission it was necessary to try and win an external psychologist for a six months term. The result was that we had only civilian female psychologists as candidates. To guarantee the permanent psychological welfare on the spot we decided to deploy these female psychologists after a two weeks instruction phase at the AIPSC and with a military psychologist as tutor for the first six weeks in the mission. The opinions and reactions of the troops were divided between agreement, indifference and disapproval. The main difficulty of the civilian female psychologists was to be the only woman among 500 male soldiers and not to be a well-trained soldier. It was difficult for the troops to accept them, although they did a good job as psychologists. Their main task is the psychological care-giving to all soldiers of the mission, especially giving support concerning partnership problems, problems resulting from the stressful deployment conditions, critical incident stress management, communication training, group dynamic problem solving.

Psychological counselling to commanders

In addition to the care-giving function the psychologist is the adviser of the commanding officer (CO) of the contingent concerning questions of psychology of leadership as well as all issues of organisation and military psychology.

For this assignment it seems to be very helpful to have at least passed a military training or to be a professional soldier or reserve with an adequate and genuine, not temporary military rank. For the current rotation in April 2001 we were able to deploy a military psychologist who is a professional officer, which will make the acceptance easier for the CO and the troops.

Psychological family support

To take care of the family members of the deployed soldiers is a growing responsibility for the AIPSC. Until now the psychology section of the AIPSC is not able to guarantee a comprehensive social care-giving net for the loved ones at home.

The problem is that the families are spread over all the provinces of Austria and there is no net of decentralised organisations where the relatives could seek help and support.

There are small beginnings to provide social and especially psychological support for the families. The present solution is to refer family members to the psychologists employed by the induction centres or the military hospitals, which are located in most of the federal provinces of Austria. This mediation has proved to be a good measure in case of partnership problems or problems with children at school or kindergarten.

Kateřina Bernardová: Purpose, Objectives, and Goals of the Field Military Psychology of the Army of the Czech Republic.

The Military Psychologist of the General Staff of Army of Czech Republic

The Army of the Czech Republic has been passing through a very difficult process of transformation and this process also affects the Psychological Service within the army. In the following, I would like to introduce you some concepts, objectives, and goals of the PSYCHOLOGICAL SERVICE of the Army of the Czech Republic as well as its structure and organization.

The PSYCHOLOGICAL SERVICE of the Army of the Czech Republic was established on July 1st, 2000, as a jointly coordinated system of services in the field of defense. It is supposed to provide service to all soldiers and civil employees working for the Ministry of Defense and the Army of the Czech Republic, including veterans, their families, and relatives. The Psychological Service is a SERVICE with a mission to actively provide a wide range of psychological services for the human resources in the army – for both individuals and groups.

Two important moments arose during the genesis of the service. The first one was the establishment of the Psychological Service itself. The second one then was the strong support from the Chief of the General Staff and the Command of the Army of the Czech Republic.

Several reasons have led to the establishing of the service. Let me name at least some of them:

The PSYCHOLOGICAL SERVICE of the Army of the Czech Republic has been formed to support the mental health care, to increase the mental preparedness of both individual soldiers and whole units, to improve the quality of life of career soldiers, to intensify the prevention of the social pathology, to improve the educational and self-educational processes upon the military conditions, and, finally, to guarantee the compatibility of psychological services of the Army of the Czech Republic with those of other North Atlantic Treaty Organization allies.

The whole system of PSYCHOLOGICAL SERVICES of the Czech army consists of three subsystems:

- clinical military psychology
- field military psychology and
- educational military psychology

Let me now guide you through the second subsystem, the FIELD MILITARY PSYCHOLOGY. It is predestined to accompany the soldier while being in the field. The purpose of the field psychologist's work is offering psychological service to all soldiers in the mandatory service, career soldiers and their family members, commanders on all levels of command, and veterans.

The range of services offered by the field military psychologists is quite wide. These specialists are mainly concerned with **psychodiagnostics**. They (1) construct soldiers' personal profiles; (2) survey the soldiers' actual mental state; (3) search for new options to build up desired personal qualities. Field military psychologists also provide personality diagnostics that helps commanders at various levels of command.

The field military psychologists also perform work related to **psychotherapy**. This activity is focused on helping soldiers to deal with crisis in their personal life or during the discharge of their duty, crises in the interpersonal relations within both their families and military units. Our psychologists are ready to stand by the soldier when he suffers any adaptation difficulties.

Field military psychologists are also able to provide **psychological counseling** for career soldiers. They advise them in solving partnership crisis, problems within the group of their colleagues, and to deal with stressful or critical life events and stress. They can also help in prevention of drug and alcohol abuse.

In the field of basic or applied **research and surveys**, field military psychologists are focused mainly on evaluating and analyzing the level of psychosocial conditions of soldiers finding themselves in various challenging situations. Presentations of my colleagues Mr. Strobl, Ms. Palánová, and Maj. Lassak will demonstrate results of our recent longitudinal surveys in the Czech SFOR and KFOR units located in Bosnia and Kosovo.

Lecturing is also a very important part of our work. Field military psychologists lecture for a broad audience. Their presentations are focused on hot topics of present days – drugs, chicane, violence, but also on relaxation techniques including active relaxation and its positive effect on the mental conditions. Last but not least, these lectures also concern the rules and challenges of human communication.

The Czech field military psychologists have their undeniable permanent position in the **peacekeeping units** abroad. They participate in the training for this stressful life event, and after the mission is completed the field military psychologist continues to care for soldiers once they return home.

A very formidable task for the psychologists is the fight against **social pathology**. Fortunately, this is not a serious problem in the Czech army.

It is worth noting that the military psychologists would not be able to succeed in all these attempts without both mutual cooperation within the team and interactions with other professionals in the resort as well as beyond it.

The subsystem of the FIELD MILITARY PSYCHOLOGY is professionally and methodologically directed by the Military Psychologist of the General Staff of the Army of the Czech Republic. This person is directly subordinated to the Chief of the General Staff and is part of his personal staff. The Military Psychologist of the General Staff has in his/her subordination two separate departments: these are (1) the Center of the Advanced Social Studies and (2) the Stress Research Center. These centers perform the expert activities for the Chief of the General Staff and the Command of the Czech Army. This body counts approximately 30 people working in both departments, mainly psychologists. The Military Psychologist of the General Staff of the Army of the Czech Republic also carries out a variety of tasks required to keep the whole system functional.

The Military Psychologist also has in his / her subordination 3 psychologists working on the operational levels of command in the Command of the Army, in the Command of the Air Force, and in the Command of the Territorial Defense. These 3 psychologists are members of the staff of the Commands on their operational levels. They guide their colleagues - field military psychologists working in the units.

At this moment, 26 field military psychologists are working in the Czech Army. Most of them are men with the average age of about 35 years. Vast majority of them are adequately educated at the prestigious Czech universities. Their professional level is very high.

From October 1st, 2001, approximately 40 other systemized positions of psychologists will be established. After filling all of these positions, the system will look as follows:

the Military Psychologist of the General Staff
psychologists on operational levels of command, who will lead
psychologist in the 1st Mechanized Infantry Division and in the commands of all brigades and
bases
field military psychologists who will work in all battalions that have more than 500 soldiers.

The care for the human potential in the Czech army will then be spread all over the air force bases and other important military units.

As a conclusion, I would like to say that FIELD MILITARY PSYCHOLOGISTS has done an incredible amount of work in their current units and in handling some stressful life events in the Czech Republic as well as abroad in Bosnia, Kosovo, and other countries. They created and started the **project of the socio-cultural training** of soldiers who are being deployed to the missions. They have been working on the **project of the psychological training** of those soldiers. They carried out several parts of the survey of the psychosocial conditions of soldiers in mission. They are also trying to introduce the field military psychology in the Air Force units where the psychological care is significantly missing.

Vast majority of people in the field military psychology subsystem understands the purpose of their work. They know well the objectives of their work, and they also know their immediate and long run targets. They have the guts, the energy, and the motivation for their work. This is why we see the future of the PSYCHOLOGICAL SERVICE of the Army of the Czech Republic in a very bright light. And, we will keep our fingers crossed for them.

Thank you for your attention.

Amy B. Adler, Carl Andrew Castro: The Impact of Lost Leave on the Medical Readiness of US Soldiers: It's not a European Vacation.

The U.S. Army Medical Research Unit-Europe, Germany

The impact of operations tempo (OPTEMPO) on soldier and unit readiness has been a primary concern of leaders and researchers in the U.S. Army (Castro & Adler, 1999). The extent to which repeated deployments, training exercises and garrison duties take a toll on readiness has been documented in a series of analyses conducted by the U.S. Army Medical Research Unit-Europe on data from a two-year study of U.S. soldiers stationed in Germany and Italy. Depending on the type of environment (deployed, garrison or training), the relationship between workload factors and outcomes varies. For example, the amount of days spent in training does not impact family strain, but it is associated with higher combat and operational readiness scores (Castro & Adler, 2000). Similarly, work hours are associated with increased family strain and decreased military readiness (Castro & Adler, 2000). Working on one's day off is associated with increased alcohol use for single junior-enlisted soldiers (Castro, Huffman, Bienvenu, & Adler, 1999). Based on these kinds of findings, there is clear and emerging evidence that high workload takes a toll on everything from medical to operational readiness.

One underlying assumption of the OPTEMPO readiness model is that if the pace of operations remains high, without time off for recovery, readiness and performance will decline. Soldiers in the U.S. Army work hard. Their 30 days of leave a year and their passes issued by commanders provide them a break from an otherwise relentless pace of military operations. In this paper, we examine the degree to which respite from their workload in the form of vacation time affects readiness indicators.

The civilian literature on stress and coping emphasizes the importance of leisure activities in maintaining health and adjusting to work. Nevertheless, few studies have directly examined

the role of vacations. While there is some indication that vacation is linked to increased job and life satisfaction (Lounsbury & Hoopes, cited in Westman & Eden, 2000), Eden (cited in Westman and Eden, 2000) found that despite some improvements in psychological strain during vacation, scores on measures of strain rose to pre-vacation levels immediately after the vacation.

In a study of the impact of vacation on burnout, Westman and Eden (1997) studied 76 clerks in an Israeli electronics firm. They found that vacation was associated with a reduction in burnout scores during the vacation and three days after returning to work. This improvement faded over time, however, and returned to pre-vacation levels 3 weeks after the vacation ended. The authors conclude that vacations provide only temporary respite from work-related burnout.

In a study of 53 employees of an Austrian hardware manufacturer, Strauss-Blasche, Ekmekcioglu, and Marktl (2000) found that three days after vacation there were improvements in physical complaints, sleep and mood compared to pre-vacation levels but no changes in life satisfaction. Of those improvements, physical complaints remained at reduced levels 5 weeks post-vacation. The authors confirm that vacations may result in short-term improvements in well-being.

Although the respite may be temporary, vacations have been linked to long term physical health. In a large-scale study of middle-aged American men at high risk for coronary heart disease, men who reported having had a vacation over a five-year period had lower mortality rates, especially those deaths attributable to coronary heart disease, nine years later (Gump & Matthews, 2000). This effect was found even when socio-economic status and health during the study were controlled. The authors did not, however, assess the amount of time the men spent on vacation but rather asked whether the men had a vacation or not. In addition, the personality differences that might account for both taking a vacation and being at risk for coronary illness were not assessed.

Thus, the research, while sparse, suggests that there may be long-term physical health benefits to vacations (or the kind of personality associated with taking a vacation) and evidence for short-term psychological relief from job stress. The degree to which this may apply to military personnel is not certain. The only research on leave time and military service that we were able to identify was a study of 81 Israeli reservists who found respite in terms of burnout and psychological stress from their civilian jobs one week after returning to work following a period of active military service (Etzion, Eden, & Lapidot, 1998). The role of leave, as vacations are called in the U.S. military, in providing respite to soldiers has not been examined empirically.

In the present study, we examined a stressor related to vacations that has specific relevance to the U.S. military: lost or cancelled leave and passes. In the U.S. military, a commander can cancel a soldier's leave and pass if the mission requires it. The reality of the high OPTEMPO in U.S. forces in Europe is that soldiers are not guaranteed that they can take the leave time they have earned – their leave time may be cancelled, accumulated as part of the following year's total or simply lost (if there is no opportunity to take it). Soldiers, regardless of rank and length of service, earn 30 days of leave a year. They can accrue up to 90 days of leave over a three-year period. Any amount over that is "lost" and cannot be recovered. There are exceptions to this policy, such as accruing leave while deployed. Thus, as part of examining the relationship

between measures of OPTEMPO and readiness, we focused on the role of lost and cancelled leave time in accounting for individual differences in medical readiness.

METHODS

Research Sample

The data from this study were drawn from a large on-going longitudinal study assessing the impact of operations tempo (OPTEMPO) on U.S. Army soldiers and units stationed in Europe (Castro, Adler, and Bienvenu, 1998). The soldiers in this study completed the questionnaire from April to June 2000. The sample consisted of 623 soldiers assigned to one of ten units (company size) stationed in either Germany or Italy. Of these units, five were combat arms units and five were combat support or combat service support.

There were 546 male soldiers and 77 female soldiers (comprising 87.6% and 12.4% of the sample, respectively), ranging in age from 18 to 49 years ($M = 25.23$, $SD = 5.51$). There were more junior-enlisted soldiers (62.9%) than non-commissioned officers (NCOs; 37.1%). Half of the soldiers were married (50.4%); 41.4% were single, and 8.0% were separated or divorced.

OPTEMPO Measures

We assessed soldiers' OPTEMPO through a series of questions about number of hours worked per day, number of days worked per week, number of days spent on training exercises in the past six months, number of deployments, and number of years of military service.

Lost Leave Time Measure

There was one question asked about lost leave time: "How many days of leave and/or passes have been lost or cancelled in the past 12 months?"

Moderating Variables

Recognition. We assessed Recognition using a 3-item scale (Brown & Leigh, 1996). The items, rated on a 5-point scale from strongly disagree to strongly agree included "I rarely feel my work is taken for granted," "My superiors generally appreciate the way I do my job," and "The organization recognizes the significance of the contributions I make." Reliability for the scale is high (Cronbach's $\alpha = .70$).

Task Significance. Task Significance (Bliese, Escolas, Christ, & Castro, 1999) was measured by 3-items on a 5-point scale from strongly disagree to strongly agree. The items were "I feel that what I am doing is important for accomplishing my unit's mission," "I am making a real contribution to accomplishing my unit's mission," and "What I do helps accomplish my unit's mission." Reliability was very high (Cronbach's $\alpha = .94$).

Leadership. Cohesion between soldiers and leaders, also known as vertical cohesion, was assessed using 12-items, six items each pertaining to officers and non-commissioned officers

(NCOs; Marlowe et al., 1985; Vaitkus, 1994). This scale has been used in previous studies (e.g., Bliese, Escolas, Christ, & Castro, 1998). The two vertical cohesion scales consisted of the following 6-items: (a) "The officers/NCOs in my unit establish clear work objectives," (b) "The officers/NCOs in my unit are interested in my personal welfare," (c) "The officers/NCOs in my unit delegate work effectively," (d) "The officers/NCOs in my unit let soldiers know when they have done a good job," (e) "The officers/NCOs in my unit avoid micromanaging soldiers' work," and (f) "The officers/NCOs in my unit are interested in what I think and how I feel about things." The Cronbach's alpha for the officer and NCO leadership scales in the current sample was 0.90 and 0.92, respectively.

Leave Taken. There was one question on amount of leave time taken: "How many days of leave and/or passes have you taken in the past 12 months?"

Outcome Measures

Physical Symptoms. The 22-item Physical Symptoms scale assesses a variety of common physical complaints from headaches to stomach intestinal upset on a 4-point response scale from not at all to very often. Items were summed to create a weighted sum score. This scale has been used in several U.S. army studies (e.g., Bliese, Escolas, Christ, Castro, 1998; Castro, Bienvenu, Huffman, & Adler, 2000; Halverson, Bliese, Moore, & Castro, 1995).

Depression. Depression was measured by a 7-item scale adapted from Radloff's (1977) Center for Epidemiological Studies-Depression scale (CES-D Scale; see Ross & Mirowsky, 1984). The items describe symptoms of depression (e.g., felt lonely, trouble keeping your mind on what you were doing) and instructs respondents to rate how many days during the past week they have had each of the feelings or experiences on a scale from 0 to 7 days. The modified version of the scale correlates .92 with the full CES-D (Mirowsky, 1996). The scale has been used in other research with U.S. Army populations (e.g., Castro et al, 2000). Reliability for this scale in the present study was high (Cronbach's Alpha=.87).

RESULTS

Descriptive Statistics

Table 1 presents the means and standard deviations of the moderators and outcome measures. In terms of OPTEMPO, soldiers reported working 10.9 hours a day (SD=3.3) and 44.6% reported performing duty-related work more than 5 days in the past week. In terms of the number of training days in the past 6 months, 22.0% of soldiers reported no days on a training exercise, 22.2% reported 1 to 14 days, 17.9% reported 15 to 30 days of training exercises, 24.3% reported 31 to 60 days, and 12.6% reported more than 61 days. In terms of deployment history, 42.1% had been on a deployment lasting more than 30 days in their military career; the total sample averaged .2 deployments for every year of military service, or one deployment every five years.

In terms of lost or cancelled leave, 86.9% of soldiers reported no lost leave, 5.7% reported losing 1 to 7 days, 4.2% reported losing 8 to 14 days, and 3.2% reported losing more than 14 days. Lost leave did not correlate with leave taken ($r=.02$, n.s.) or with age ($r=-.07$, n.s.). There were no differences in amount of lost leave between junior-enlisted soldiers and NCOs, $t(617)=.97$, n.s.

Table 1. Means and Standard Deviations of Moderators and Outcome Measures

Variables	M	SD
Health Measures		
Physical Symptoms	31.5	9.1
Depression	10.9	12.1
Moderators		
Leave Taken	17.40	13.0
Task Significance	3.3	.9
Recognition	2.9	.8
NCO Leadership	3.1	.9
Officer Leadership	3.0	.9

N=623.

In order to assess the impact of Lost Leave on soldier physical and psychological health, we ran a series of regression equations. Each independent variable was first z-transformed. The regression equation included the predictor variable (i.e. lost leave), one of the moderator variables, and the interaction term. The dependent measures were Physical Symptoms and Depression Symptoms. Results are presented in Tables 2 through 6. In the case of predicting Physical Symptoms, the main effects for Lost Leave, the moderators, and their interactions were significant for all moderators except for leave taken. For the moderator Leave Taken, the interaction with Lost Leave was significant but the main effect for leave taken was not. For the regression equations predicting number of Depressive Symptoms, there were significant main effects for Lost Leave, Task Significance, Recognition, and NCO Leadership and Officer Leadership but no significant interaction effects. There was no main effect or moderating effect for Leave Taken in predicting Depression Symptoms.

Table 2. Regression Results from Lost Leave and Task Significance predicting Physical and Depression Symptoms

Variables	Outcome									
	Physical Symptoms					Depression Symptoms				
	Beta	SE	β	t	p<	Beta	SE	β	t	p<
Constant	31.46	.36		87.97	.001	10.70		.46	23.25	
.001										
Lost Leave	.80	.39	.09	2.04	.05	1.05	.51	.09	2.06	.05
Task Significance	-1.75	.36	-.19	-4.90	.001	-3.68	.46	-.31	-7.99	.001
Lost Leave X Task Significance	-.55	.29	-.08	-1.90	.06	-.37	.37	-.04	-1.00	n.s.

Note: Physical Symptoms Total $R^2 = .06$; $F(3, 614) = 13.74$, $p = .001$.
 Depression Total $R^2 = .11$; $F(3, 615) = 26.12$, $p = .001$.

Table 3. Regression Results from Lost Leave and Recognition predicting Physical and Depression Symptoms

Variables	Outcome									
	Physical Symptoms					Depression Symptoms				
	Beta	SE	β	t	p<	Beta	SE	β	t	p<
Constant	31.44	.35		89.58	.001	10.77	.45		23.70	.001
Lost Leave	.75	.37	.08	2.03	.05	1.24	.48	.10	2.56	.02
Recognition		-2.36	.35	-.26	-6.70	.001		-4.12	.45	-.34
9.07 .001										
Lost Leave X Recognition	-.90	.32	-.11	-2.79	.01	-.11	.42	-.01	-.27	n.s.

Note: Physical Symptoms Total $R^2 = .10$; $F(3, 614) = 22.03$, $p = .001$.

Depression Total $R^2 = .13$; $F(3, 615) = 31.72$, $p = .001$.

Table 4. Regression Results from Lost Leave and NCO Leadership predicting Physical and Depression Symptoms

Variables	Outcome									
	Physical Symptoms					Depression Symptoms				
	Beta	SE	β	t	p<	Beta	SE	β	t	p<
Constant	31.46	.35		90.48	.001	10.72	.45		23.76	.001
Lost Leave	.90	.35	.10	2.55	.02	1.27	.46	.11	2.75	.007
NCO Leadership	-2.55	.35	-.28	-7.37	.001	-4.14	.44		-3.5	-9.32
.001										
Lost Leave X NCO Leadership	-.98	.30	-.13	-3.31	.01	-.55	.38	-.06	-1.44	n.s.

Note: Physical Symptoms Total $R^2 = .12$; $F(3, 614) = 26.86$, $p = .001$.
 Depression Total $R^2 = .14$; $F(3, 615) = 34.36$, $p = .001$.

Table 5. Regression Results from Lost Leave and Officer Leadership predicting Physical and Depression Symptoms

Variables	Outcome									
	Physical Symptoms					Depression Symptoms				
	Beta	SE	β	t	p<	Beta	SE	β	t	p<
Constant	31.48	.35		89.30	.001	10.87	.46		23.45	.001
Lost Leave	1.00	.36	.11	2.81	.01	1.44	.47	.12	3.06	.003
Officer Leadership	-1.72	.35	-.19	-4.90	.001	-3.21	.46		-2.7	-6.93
.001										
Lost Leave X										

Officer Leadership -1.37 .32 -.17 -4.34 .001 -.66 .42 -.06 -1.60 n.s.

Note: Physical Symptoms Total $R^2 = .08$; $F(3, 614) = 18.81$, $p = .001$.

Depression Total $R^2 = .09$; $F(3, 615) = 21.07$, $p = .001$.

Table 6. Regression Results from Lost Leave and Taken Leave predicting Physical and Depression Symptoms

Variables	Outcome									
	Physical Symptoms					Depression Symptoms				
	Beta	SE	β	t	p<	Beta	SE	β	t	p<
Constant	31.53	.36		87.03	.001	10.88	.48		22.60	.001
Lost Leave	1.55	.37	.17	4.15	.001	1.83	.50	.15	3.69	.001
Taken Leave	-.26	.37	-.03	-.72	n.s.	-.40	.49	-.03	-.82	n.s.
Lost Leave X Taken Leave		-1.01	.33	-.13	-3.08	.005	-.71	.44	-.07	-1.62
n.s.										

Note: Physical Symptoms Total $R^2 = .04$; $F(3, 613) = 7.42$, $p = .001$.

Depression Total $R^2 = .02$; $F(3, 614) = 4.92$, $p = .002$.

DISCUSSION

The pace of operations for U.S. soldiers involves long workdays, several weeks of training, and the possibility of deployment. While there is evidence from research with civilian employees that respite is gained from vacations, in this study we failed to establish a direct link between Leave Taken and Physical or Depression Symptoms. The loss or cancellation of leave, however, was directly linked to Physical and Depression Symptom levels in U.S. soldiers. Moreover, higher rates of Lost Leave were predictive of greater physical symptomatology and this relationship was moderated by Officer and NCO Leadership, Task Significance, and Recognition.

Lost and/or cancelled leave is an area that has not been previously explored. The reason that lost and cancelled leave is associated with diminished medical readiness may be due to several factors. First, lost and cancelled leave may result from any combination of work stressors including uncertain training or deployment dates, other last-minute schedule changes, task overload, and short suspenses. Surprisingly, however, based on data not presented here,

scores on a predictability scale were not correlated with lost leave. Second, lost and cancelled leave also suggests increased personal stressor in terms of family strain and financial costs incurred when vacation plans are changed. Third, lost and cancelled leave may be a stressor for soldiers because it creates a sense of relative deprivation, that soldiers are being deprived of some benefit to which they are normally entitled.

Regardless of the stressors involved when leave is lost or cancelled, there are things that leaders can and should do that can moderate the impact of lost leave on medical readiness. When soldiers feel their accomplishments are recognized, that their jobs make a significant contribution, and leadership at both the officer and NCO level is positively perceived, the impact of lost leave on medical readiness is reduced. These moderating effects suggest that there are behaviors leaders and organizations can engage in when faced with having soldiers lose leave.

Finally, unlike previous studies, we did not find evidence for a positive impact of leave on depression symptoms. This lack of positive impact on psychological wellbeing may be a result of the time frame used in the study. In our study, soldiers were asked about their leave time during the past 12 months but the health questions were not asked immediately following this leave period the way it was in previous research. There may be a respite effect from leave but if there is, like previous research has found, this respite appears to be short-lived at best. In terms of physical health, however, taking leave moderates the impact of lost leave on physical symptoms.

Our results suggest that for U.S. soldiers, taking leave is not as critical an issue as is losing leave. It is the loss and cancellation of the promise of leave that is predictive of increased physical and psychological symptomatology. For U.S. soldiers, loss and cancellation of leave may signal a lack of commitment by the Army to them that is only counteracted through strong leadership. When soldiers perceive that their sacrifice (i.e. loss or cancellation of leave) is worthwhile and appreciated, or when they have had respite, they do not have as many physical symptoms. The exact mechanism by which job-related variables moderate the impact of lost leave is not well understood. And why these same moderators do not affect depression symptoms is also not adequately understood. Taking the literature on vacation respite into account, it may be that leave issues affect soldier physical health in the long-run while psychological issues are affected in the short-run, if at all.

These results have implications for the military at two levels. First, it points to the importance of minimizing the amount of lost and cancelled leave time. Second, the results identify things that leaders can do to minimize the impact of lost leave on soldier medical readiness.

REFERENCES

- Bliese, P.D., Escolas, S.M., Christ, R.E. & Castro, C.A. (1998). Human dimensions assessment of the Task Force XXI Advanced war fighter experiment. (DTIC ADA 239889). Alexandria, VA: Defense Technical Information Center.
- Bliese, P.D., & Halverson, R.R. (1996). Individual and nomothetic models of job stress: An examination of work hours, cohesion, and well-being. Journal of Applied Social Psychology, 26, 1171-1189.

Castro, C.A. & Adler, A. B. (2000). The impact of operations tempo: Issues in measurements. Proceedings of the 42nd Annual Conference of the International Military Testing Association, Edinburgh, UK.

Castro, C.A. & Adler, A.B. (1999). OPTEMPO: Effects on soldier and unit readiness. Parameters, Autumn, 86-95.

Castro, C.A. & Adler, (2000). Working in the zone: Maintaining optimal readiness in U.S. soldiers. Proceedings of the 36th International Applied Military Psychology Symposium, Split, Croatia.

Castro, C. A., Adler, A. B. & Bienvenu, R. V. (1998). A human dimensions assessment of the impact of OPTEMPO on the forward-deployed soldier. Walter Reed Army Institute of Research, Research Protocol #700, Washington, D.C.

Castro, C. A. & Adler, A. B. (1999). Military deployments and soldier readiness. Proceedings of the 35th International Applied Military Psychology Symposium, Florence, Italy.

Castro, C.A., Bienvenu, R., Huffman, A.H., & Adler, A.B. (1999). USAREUR/7A OPTEMPO and PERSTEMPO Study: In-Progress Report #1. (USAMRU-E Technical Brief #99-04). Heidelberg, Germany: U.S. Army Medical Research Unit-Europe.

Castro, C.A., Bienvenu, R., Huffman, A.H., & Adler A.B. (2000). Soldier dimensions and operational readiness in U.S. Army forces deployed to Kosovo. International Review of the Armed Forces Medical Services, 73, 191-199.

Gump, B.B., & Matthews, K.A. (2000). Are vacations good for your health? The 9-year mortality experience after the multiple risk factor intervention trial. Psychosomatic Society, 62, 608-612.

Halverson, R. R., Bliese, P. D., Moore, R. E. & Castro, C. A. (1995). Psychological well-being and physical health symptoms of soldiers deployed for Operation Uphold Democracy: A summary of the human dimensions research in Haiti. (DTIC ADA 298125). Alexandria, VA: Defense Technical Information Center.

Hackman, J. R. & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. Journal of Applied Psychology, 60, 159-170.

Halverson, R. R., Bliese, P. D., Moore, R. E. and Castro, C. A. (1995). Psychological well-being and physical health symptoms of soldiers deployed for Operation Uphold Democracy: A summary of the human dimensions research in Haiti. (DTIC ADA 298125). Alexandria, VA: Defense Technical Information Center.

Etzion, D., Eden, D., & Lapidot, Y. (1998). Relief from job stressors and burnout reservice as a respite. Journal of Applied Psychology, 83, 577-585.

Marlowe, D.H., Furukawa, T.P., Griffith, J.E., Ingraham, L.H., Kirkland, F.R., Martin, J.A., Schneider, R.J., & Teitelbaum, J.M. (1985). New Manning System Field Evaluation: Technical Report No.1. Washington, DC: Walter Reed Army Institute of Research.

Mirowsky, J. (1996). Age and the gender gap in depression. Journal of Health and Social Behavior, 37, 363-380.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. Journal of Applied Psychology, 81, 400-410.

Radloff, L. (1977). The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Ross, C.E., & Mirowsky, J. (1984). Components of depressed mood in married men and women: The Center for Epidemiologic Studies' Depression Scale. American Journal of Epidemiology, 119, 997-1004.

Strauss-Blasche, G., Ekmekcioglu, C., & Marktl, W. (2000). Does vacation enable recuperation? Changes in well-being associated with time away from work. Occupational Medicine, 50, 167-172.

Vaitkus, M. (1994). Unit Manning System: Human dimensions field evaluation of the COHORT company replacement model. (DTIC ADA 285942). Alexandria, VA: Defense Technical Information Center.

Westman, M., & Eden, D. (1997). Effects of a respite from work on burnout: Vacation relief and fade-out. Journal of Applied Psychology, 82, 516-527.

Lassak Werner: Experiences of military psychologist from peace-keeping mission in former Yugoslavia.

Czech Republic

Before I will start to talk about activities of psychologist in peace-keeping mission let me shortly introduce myself.

I'm Major MA Werner LASSAK from the Czech republic. I am a military psychologist at the time I am located in mission SFOR II and also I work for the 5th mechanized battalion of the Czech army which located in Bosna and Hercegovina.

It has composed of HQ, HQ company, A - coy (combat company), part of MP (military police) unit, recce platoon, FST (field support team) and field dressing station. These units are located on base at Donija Ljubija in the Republic of Serbia in Bosna and Hercegovina.

Logistic company, B - coy (combat company), part of field dressing station and MP, engineer company and NSE (national support element) are located on base at Bosanska Krupa in the Federation of Croatia and Muslim republic in Bosna and Hercegovina.

Some units are located in Serbia's area or Muslim's area. Only the Czech battalion is located into two different areas - Muslim and Serbian territory from all units of SFOR.

Before our soldiers have moved in area of responsibilities they had attended training. During the training activities they exercised model situation which they will resolve in Bosna. The psychologist attended all training with other soldiers of the 5th mechanized battalion.

For example:

- patrol activities
- abseiling from helicoptere
- activities after mines incidents
- check point activities
- VIP escort etc.

Part of their training activities is a socio-culture training. During that training they have got a lot of information about population and areas where they will stay and work.

The other part of their training is a psychology training. The soldiers could watch video from those places and talked with soldiers who already attended mission in Bosna and Hercegovina. The psychologist in differential psychology training (different is the training for leader of squad from training for squadron commander and so on) discussed with them about problems which wait for soldier in Bosna or about their emotion which are joint with their transport to Bosna. The soldiers can discuss with psychologist about all of their problems or problems their families, partners etc.

The base of activities of military psychologist are composed of roles in garrison. But they are modified by conditions of real danger disintegration like psycho or physical disintegrity of soldiers.

The psychologist is an adviser of commander of the 5th mechanized battalion and other commanders of companies. He doesn't wear white coat but he wears camouflage uniform like other soldiers. He works at complying of operation mission together with other soldiers. His everyday activities is focused into interpersonal communication and relationship. He works as psychotherapeut and adviser. He works with emotion which are more deep and more dynamic. It isn't important which way or description he use but is important his presence to offer himself. To be able to give psycho-social support to other means to be able to help himself, acquire control against fear, anxiety, panic, suffering, rage, self-regret etc.

If the negative emotion will be influence on us the result can be disorganization, uncontrol and risk behavior which in conditions of peace-keeping mission can be very danger. Result of those activities can be injury or death.

I think that our soldiers attended good training and they are adequate prepared to accomplit tasks of mission SFOR II.

As this missions is my thierd peace-keeping mission we can discuse about my experience for long time but we will continue about it on Thursday in workshop when we will have timearea for those discusion.

Tomislav Filjak, Anto Zelic, Zelimir Pavlina: A Framework of Psychological Preparation and Survey of Psychological Condition of Croatian Participants in UN Missions.

Ministry of Defence of the Republic of Croatia

INTRODUCTION

Bi-polarity of the world being no longer a reality, the geostrategic situation has also altered, and new threats have come instead of the large-scale wars the world has seen before. Military response to the new threats are known as "new operations" (arms control, humanitarian assistance, counterinsurgency, peace operations ...). New operations, especially peace operations, have been rather frequent in the course of 1990ies.

To prove that is the fact in the period 1988 - 1998 the United Nations initiated 36 new missions compared to 13 operations undertaken in the period 1948-1988. In the first half of the 1990ies, the period of termination of the Cold war, the operations were almost exclusively initiated by the UN, whereas later, especially due to failure of the UNPROFOR mission and the UN-USA role conflict, the number of the UN missions decreased. This is not to say that there have been fewer peace missions, they have only been taken over and managed by other international organisations. To illustrate, in the 1995 20 000 UNPROFOR members completed their mission in Bosnia and Herzegovina to be replaced by 60 000 IFOR personnel. Effectiveness of the UN missions and the present and the future role of the UN being beyond the scope of this paper, the conclusion remains on the noticeably increased number and significance of the operations of the kind regardless of the auspices.

CROATIAN EXPERIENCE

Until the late 1990ies Croatia did not take part in the operations undertaken by UN or other international organisations. However, Croatia and its neighbouring countries were a theatre of a number of operations by UN and other international organisations, some of which, in our view, have had significant repercussions on the further development of the operations of the kind. They are listed in Table 1.

Table 1.

INTERNATIONAL OPERATIONS IN CROATIA IN THE PERIOD 1992-1999

OPERATION UNDERTAKEN BY:	OPERATION TITLE (ABBREV.)	FULL TITLE	*GOAL OF MANDATE (TYPE OF MISSION)	PERIOD
UN	UNPROFOR	UNITED NATIONS PROTECTION FORCE	peace-keeping operation	March 1992-March 1995
UN	UNCRO	UNITED NATIONS CONFIDENCE RESTORATION OPERATION IN CROATIA	peace-keeping operation	March 1995-January 1996
UN	UNTAES	UN TRANSITIONAL ADMINISTRATION FOR EASTERN SLAVONIA, BARANJA AND WEST SRMIUM	peace installment operation; support to local authorities	January 1996-January 1998
UN	UNMOP	UNITED NATIONS MISSION OF OBSERVERS IN PREVLAKA	peace-keeping operation	January 1996 onwards
NATO/WEU		OPERATION SHARP GUARD	disarmament control /embargo control	November 1992 June 1996
NATO		DENY FLIGHT	demonstration of force; strikes	November 1992-December 1995
NATO	IFOR	IMPLEMENTATION FORCES - OPERATION JOINT ENDEAVOUR	peace-keeping operation	December 1995-December 1996
NATO	SFOR	STABILIZATION FORCES - OPERATION JOINT GUARD	peace-keeping operation	December 1996 onward
NATO		OPERATION ALLIED FORCE	peace-enforcement operation	March – June 1999

* Mission type definition is optional, reflecting the author's view. .

UN missions conducted in Croatia covered over a 1/4 of the territory. NATO missions primarily had mandate for Bosnia and Herzegovina, depending on Croatian air and land territory and traffic infrastructure for passage. Some units, however, have been hosted in Croatia, mostly

in ports and close to the B&H border, and for extended periods. A similar situation was with the NATO operations in Yugoslavia.

OUTLINE OF FACTORS AFFECTING PSYCHOLOGICAL READINESS IN PEACE OPERATIONS

“Variety” of Croatian people and the Armed Forces’ experiences with the missions provided valuable guidelines for Croatian military psychologists for new military operations (especially peace operations) in the future.

Based on direct observation of international units and their conduct in the field, through their contacts with the people and Croatian Armed Forces and the enemy forces, as well as on insight into relevant reference, we draw an outline of factors affecting psychological readiness in peace missions (see Table 2).

Table 2.

Outline of factors affecting psychological readiness in peace operations

DEPLOYMENT FEATURES			POSSIBLE CONSEQUENCES DURING THE MISSION	POSSIBLE CONSEQUENCES FOLLOWING THE MISSION
Mission goals	Variable and intricate general goal of the mission		Perceived lack of purpose of mission	Disappointment, reluctance towards future missions, leaving the military
	Representing the country		Possible collision with general mission goals	Critique or commendation in the home public
	Personal goals	reasonable	Functioning in accordance with the conditions	Perceived mission accomplishment and personal development
		idealistic	Disappointment, tension, aggressiveness	Disappointment, difficult readjustment to the home country, psychological difficulties
Depl. charac.	Peace operation		Restricted use of force	Depending on correct implementation
	International		Cooperation with other militaries	Improved overall military trainedness
	Neutrality		Stress faced by peace operations personnel	Difficult readjustment upon return and psychological difficulties
Deployment conditions	War or post-war setting		Deaths Wounding Demonstration of overall military preparedness	Disabledness Psychological difficulties Reinforced prestige of the military or scandals and investigations
	Conflict brought under control		Routine Boredom	Sense of futility and purposelessness of the task (mission)
	Contacts with local armed forces, population and culture in general		Misunderstanding of the conflict Cultural shock	Difficult adjustment, psychological disturbances
	Locally hired personnel		Taking one of the sides	Sense of guilt
	Free time	Organised	Adequate readiness for regular assignments	Sense of duty fulfilment and purpose
		Not organised	Decreased readiness Incidents	Sense of purposelessness Discipline and criminal procedures
	Home media attention	Adequate	Sense of mission importance and feeling supported	Sense of pride for participating in the mission
		Scarce or non-existing	Feeling deserted and facing purposelessness	Disappointment
	Contacts with the family	Made regularly	Reduced concern	Aided readjustment upon return
		No contacts	Uncertainty and concern; quitting and leaving the mission	Disappointment, readjustment difficulties upon return
	Relations with the family and friends	Constant and supportive	Active participation in the mission	Sense of purpose
		Unstable	Variable performance	Readjustment difficulties upon return

Manuals prepared for Croatian AF officers contain a more comprehensive outline. Briefly, it defines three groups of factors critical for psychological readiness of the personnel deployed in the mission:

- goals
- the form of deployment
- deployment conditions

Croatia's experience with peace operations showed that the goal of the mission in new operations, stated as it is in diplomatic terms, is seldom clear and constant, much like the international policy too. To soldiers deployed the objective should be presented in a participation-justifying manner and their daily assignments clearly delineated. Forces members are sometimes assigned with fulfilling political goals of their respective countries. These goals

may be in collision with the general goals of the mission, which may lead to psychological conflicts, but also actual pressure and punishments or rewards.

Personal goals and expectations, often romantic and naive, should be adjusted to reality and reasonable overall objectives and outcomes of operations.

The form of deployment is determined by the nature of the operation itself. Peace operations imply demanding assignments for troops that traditional armies were not prepared for. Basic features of peace operations are non-violence and neutrality. The limits of non-violence are set through "deployment rules", and usually allow self-defence. Internationality implies readiness for joint operating with different militaries.

Peace forces are often deployed in real war settings, characterized by low yet constant threat, with only limited responding allowed. Other key features of the operations include possible "cultural shock", critical role of the media and the contact with home.

QUESTIONNAIRES

The outline and the factors enumerated served in their turn as basis for two questionnaires: Questionnaire on expectations related to mission and the Questionnaire of assessment of factors' post-mission impact. The Questionnaires contain 48 statements of comparable content, with one Questionnaire assessing the expectations related to stressors likely to be experienced during the mission, and the other assessing actual stressors experienced. In both cases the questionnaires make part of a comprehensive test battery and a collateral source of data.

Direct benefit of the questionnaire prior to the mission lies in providing insight into how reasonable expectations are to organize psychological preparations accordingly, including tailoring to individuals and drawing mission heads to subordinated individuals with problematic expectations.

Following the mission the questionnaire enables valuable insight into intensity of experiencing of different stressors, and in this regard, guides adjustment of support.

Table 3. presents the questionnaires containing assessment profiles prior to and following the mission.

Table 3.

Questionnaire of expectations related to mission and Questionnaire of assessment of factors' post-mission impact

Questionnaire on expectations related to mission	untrue	mostly untrue	partly true	mostly true	true	Questionnaire of assessment of factors' post-mission impact
1. I find general mission goals quite clear						1. Mission goals were quite clear to me before deployment
2. I allow changes in goals during the mission						2. I minded changing of goals during the mission
3. The goal of these missions can be lost easily						3. During the mission I had a sense of purposelessness of the mission
4. This mission, in my view, implies representing my country too						4. I've always taken representing my country as part of my duty
5. I see the mission as an opportunity to get to know myself better						5. I expected to get to know myself better through the mission
6. I hope to benefit from the mission for personal development						6. I notice I've developed as person thanks to the mission
7. I expect many interesting experiences						7. I've had many interesting experiences
8. I expect many exciting experiences						8. I've had many exciting experiences
9. I expect opportunity to help people						9. I've had opportunity to help people

10. I see this as an opportunity to earn					10. I've earned a substantial sum of money too
11. I hope I'll have fun too					11. I've had fun
12. This might be an opportunity to expand my point of view					12. I can see my point of view expanded
13. I hope this mission will enhance my self-confidence					13. I can feel my self-confidence enhanced
14. I would be proud to be a Croatian representative in the mission					14. I'm proud to have been Croatian representative in a mission of the kind
15. I expect to make many new acquaintances and friends					15. I've made many new acquaintances and friends
16. I hope to experience genuine comradeship					16. I've experienced true comradeship
17. I will have to control the urge to use force					17. At times I found it hard to obey restricted use of force
18. I'm looking forward to co-work with soldiers from other countries					18. I'm satisfied with the cooperation with soldiers from other countries
19. Staying out of conflict might be very hard					19. At times staying out of conflicts was almost impossible
20. I'll probably witness to deaths of local civilians					20. I witnessed to deaths of local civilians
21. I'll probably witness to deaths of local forces members					21. I witnessed to deaths of local forces members
22. I'll probably witness to deaths of members of my unit					22. I witnessed to deaths of members of my unit
23. I'll probably witness to wounding of local civilians					23. I witnessed to wounding of local civilians
24. I'll probably witness to wounding of local forces members					24. I witnessed to wounding of local forces members
25. I'll probably witness to wounding of members of my unit					25. I witnessed to wounding of members of my unit
26. I'm fully prepared for the mission					26. I think I have demonstrated my military skills
27. I think Croatia has observers ready for the missions of the kind					27. In my view, Croatian observers have fully demonstrated their military skills
28. I'll probably see destroyed houses and other material effects of war					28. I saw destroyed houses and other material effects of war
29. I'll probably see dead bodies of victims of combat					29. I saw dead bodies of victims of combat
30. I'll probably see the impact the war makes on the people					30. I saw the impact of the war on the people
31. I'll probably do routine and dull tasks					31. The tasks we did were getting more routine-like and duller
32. The conflict calling for this mission is utterly senseless					32. The conflict we came for in mission is utterly senseless
33. I know nothing about the sides in conflict					33. I can hardly distinguish the sides in conflict
34. I can hardly understand the motives of the sides in conflict					34. I can hardly understand the motives of the sides in conflict
35. I'll probably find the way of life in the mission theatre strange					35. The way of life in the mission theatre is wholly strange
36. The way the local people live will probably seem wholly unacceptable to me					36. The way the local people live is wholly unacceptable to me
37. I expect to go well along with local interpreters and other personnel					37. I went well along with the local interpreters and other personnel
38. I hope to have well-organised free time					38. Our free time was well-organised
39. I hope I'll be satisfied with the way I'll be spending my free time					39. I was satisfied with how I was spending my free time
40. Home media will devote due attention to our mission					40. Home media devoted due attention to our mission
41. I hope we'll be kept well informed on the situation in our country					41. I am satisfied with how we were informed on the situation in our country
42. I hope to have no difficulties contacting my family					42. I had no difficulties contacting my family
43. I am not (and hope I won't be) worried about my family					43. I was not worried about my family
44. I hope to have support from close persons while in the mission					44. I enjoyed support by close persons during the mission
45. I'll probably be exposed to risk of contagious diseases					45. I was often exposed to risk of catching contagious diseases

46. I hope we'll be provided hygienically tested food and water						46. We were provided hygienically tested food and water
47. I hope we'll be provided satisfactory sanitary conditions						47. We were provided satisfactory sanitary conditions
48. I hope we'll be provided appropriate medical care						48. We were provided appropriate medical care

CONCLUSION

For the very first time Croatia was included in peace operations in the late 1999, when 10 Croatian officers take part in UN mission in Sierra Leone (UNOMSIL/UNAMSIL) as observers for a 1-year period. Last year they were replaced with another group of 10 officers. Additionally, in spring 2001 we sent 5 officers as observers in UN mission on the border between Ethiopia and Eritrea (UNMEE).

The framework and the questionnaires were used in preparation before and in support during and after mission for all of the groups.

Based on the experiences so far, we weren't able to evaluate concept to some extent or to conduct psychometric validation of the questionnaire. Nevertheless, we find the experience with the groups prepared for the missions so far very useful.

Results are regularly filed, so we expect to be able to present psychometric indicators to support or improve the questionnaires and the outline.

REFERENCE:

- Adler, A. (1998.). *Operational tempo for forward-deployed soldiers in Europe*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris.
- Andersen, H. (1998.). *Danish UN-soldiers two years after*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris.
- Bartone, P.T. (1997.). *Predictors of cohesion in American peacekeeping forces*. Presented at 33rd International Applied Military Psychology Symposium, Beč.
- Chilczuk, M. (1998.). *Polish UN Peace Keeping Operations Veterans*. Presented at First International Conference on Psycho-Social Consequences of War, Dubrovnik.
- De Soir E. (1998.). *A framework to analyze combat misconduct stress behaviors during peace-support operations*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris.
- Dorff, R.H. (1996.). *Democratization and Failed States: The Challenge of Ungovernability*. *Parameters, US Army War College Quarterly*, Vol. XXVI, 2, 17-31.
- Flemming, S. (1998.). *Measuring the effectiveness of the NATO Stabilisation Force (SFOR) in Bosnia-Herzegovina*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris.
- Field Manual No. 100-23, (30 December 1994.). *Peace Operations*. Washington DC: Headquarters, Department of the Army.
- Granić, M. (28. rujna 1998.). *Govor na 53. godišnjem zasjedanju Glavne skupštine Ujedinjenih naroda*.
- Johanson, E. (1998.). *A model for understanding stress and daily experiences among soldiers in peacekeeping operations*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris

- Kirkland, F.R., Halverson, R.R. i Bliese, P.D. (1996.). Stress and Psychological Readiness in Post-Cold War Operations. *Parameters, US Army War College Quarterly*, vol. XXVI, 2, 79-91.
- Koren, B. (1999.). Emocionalni ciklus vezan uz mirovne misije. U *Izabrana poglavlja vojne psihologije za hrvatske pripadnike UNOMSIL*, Zagreb: Odjel za vojnu psihologiju Ministarstva obrane Republike Hrvatske.
- Koren, B., Zelić, A., Filjak, T. (2000.). *Psychology Preparing of First Croatian Military Officers to the Peace Operation in Sierra Leone*, XXXIIIrd International Congress on Military Medicine, Helsinki
- Luis, R. (1998.). *Portugese military in peacekeeping missions*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris
- Mylle, J. (1998.). *Partial posttraumatic stress disorder in peace support operations*. U Proceedings of 34th International Applied Military Psychology Symposium, Centre d'études en sciences sociales de la défense, Paris
- NATO Handbook* (1995.). Bruxelles: NATO Office of Information and Press.
- Phelps, Ruth H. (1996.). *Reserve Component soldiers as Peacekeepers*. Alexandria: U.S. Army Research institute for the Behavioral and Social Sciences.
- Reber, A.S. (1987.). *The Penguin Dictionary of Psychology*. London: Penguin Books.
- Segal, R.D. (1993.). *Organizational Designs for the Future Army*. United States Army Research Institute for the Behavioral and Social Sciences; prema Cvrtila, V. (1998.) Civilno-vojni odnosi u suvremenom svijetu, *Hrvatski vojnik*, vol. VIII., br. 31., str. 42.-47.
- Zelić, A. i Koren, B. (2000.). *Izvešće o psihičkom stanju hrvatskih pripadnika UNOMSIL*, interno izvješće. Zagreb: Odjel za vojnu psihologiju Ministarstva obrane Republike Hrvatske.
- ** (1996.). *United Nations Peace-Keeping*. New York: United Nations Department of Public Information.

Kateřina Bernardová, Daniel Štrobl, Josef Falář, Barbora Palánová: Process And Dynamics of the Psychosocial Conditions for Members of KFOR During Their Deployment.

KFOR is the most recent foreign action of the Czech Army which has been actively engaged in the military operations of UN and NATO since the beginning of the 90's; the participation of our chemical unit in the Persian Gulf was the first mission. This distinctly wartime operation was later exchanged for peacekeeping missions on the territory of former Yugoslavia, which is why our army had sufficient experience with this kind of military actions when it joined KFOR.

Deployment of one KFOR mission lasts six month plus one month of "before – mission" preparation. The whole mission is possible to be divided into three parts:

- before mission
- during deployment
- shortly before return

During these periods are observed interpersonal relationships (among the members of the whole unit or little groups), factors, which influence mental conditions of each individual (level of satisfaction of the basic human needs, sources of stress and relationship with family) and actual

mental state in each part of research. This challenging kind of situation affects to a greater or lesser extent the structure of personality, the dynamics of perception, the behavior of everyone involved in the mission to some degree as well as influencing the value system in the deepest part of the personality. The soldiers learn to become confident of their ability to be flexible in any given situation. The emotional aspect of their personalities enables the soldiers to adapt to many rapidly changing scenarios. They also have to cope additionally with their personal and interpersonal problems.

All these facts and data are observed in every part of peacekeeping mission and their connecting together and comparing them each other is possible to realize dynamic picture of the level of psychosocial conditions of the soldiers of the peacekeeping mission in Kosovo. Moreover we may answer the question – what represents the deployment in this foreign mission for the Czech soldier and find the possibility of improvement of the conditions of their deployment during that hard situation, that peacekeeping mission surely is.

Psychosocial research among members of the Czech KFOR unit arises from the need of the Chief of the General Staff and the headquarters of the Army of the Czech Republic to obtain and evaluate concrete information from the area of the mission and to compare these results each other and with those from previous researches. Some types of problems regularly occur in all missions.

This project is focused on obtaining a complete summary of information demonstrating potential risks. Clear indications of significant frustration among the members of the KFOR unit may lead to the proposal of equal social - technical arrangement that diminishes pressure or eliminates risks and causes.

The sample in every part of the research was not less then 30% of the whole team and people was selected for our research to cover horizontally all occupations of the soldiers and vertically every level from command to the staff. Our collection of the data was carried out in the mission area – I. part on June from 25th to 31st 2000, II. part on October from 27th to 30th 2000 and III., final part on January from 18th to 25th 2001.

If we are thinking about Czech soldier of KFOR, we have to know that his average age is 28 (minimal age was 19, maximal was 54), he is high school educated (approx. two thirds of the samples, about one third has university), if he is unmarried - is without children, if he is married – has two children.

The structure and dynamic of the mental condition and feelings was checked in all three parts by the SUPOS 7 test, in respect to the interaction of the individual with his social and work environment. Psychosocial screening during the mission is moreover focused on the personal profile of the members of the mission, based on screening, a psycho-diagnostic test battery and a questionnaire by the Czech authors.

The questionnaire that was created for use in the military area was administered for the screening of the psychosocial conditions of the Czech soldiers. Directed interviews were obviously part of our research.

Main areas of our interest are possible to be divided into these issues:

- relationships and attitudes towards local people
- motivation factors and the level of satisfaction with the mission
- interpersonal relationships in the unit
- acute mental state
- substance consumption

Relationships of the peacekeeping soldiers towards the local people are very important parts of their qualities. In previous researches the occurrence of dehumanization was proved. That kind of attitudes is growing during mission what may cause various problems from growing of aggressivity to personal problems of whom are involved. On the other hand the Muslim-Albanian population presents greater diversity in social customs, value-systems etc. Problems with recognition of the civilian population and paramilitary units may support these tendencies which occurred among approximately half of the responders. Soldiers with an university education demonstrated lower levels of this kind of attitude. From the tables is clear, that these soldiers, who weren't before mission sure with their answers, are more endangered of the development of dehumanization. The importance and consequences of the social-cultural preparation of the soldiers are obvious and the Army of the Czech Republic has added it as a part of before-mission training.

Good mental state of the Czech KFOR soldiers was repeatedly proved in every parts of our research, despite the answer "very good" was exchanged mostly for just "good".

Participation of women in the military mission is the very important topic of the Czech Army. From the results of our research is obvious little disappointment of the respondents who were less sure with participation of women in peacekeeping mission in the middle of the mission, then they were in the beginning.

Considering the economical situation of the Czech Republic the financial benefits head the motivation factors. They are important for two thirds of our respondents. Average income of a member of the Czech KFOR unit is approximately five times higher than his income at home. Professional reasons to joint KFOR are almost on the same level, but during mission is obvious polarization of motivators.

The importance of financial benefits wasn't changed even at the end of the mission, but their occurrence wasn't so different from the other issues.

Almost same percentage of people for whom was mission especially financial benefits, were satisfied with it.

59% of our respondents answered that their expectation came true. Interesting is one third of the soldiers who weren't satisfied. We will be able to see that the similar group of people had some problems with interpersonal relationships during mission, with the commander and with the members of the staff. We may assume that these issues are closely associated.

Before mission were members of the Czech KFOR unit satisfied with the composition of the unit, but at the end of the mission were relationships evaluated by one third of the respondents as bad. We may assume that this is the normal development of the group. On the other hand the observation and the controlled interview recognized, that the main reason of the problems was the creation of the Czech KFOR company. It was made up from the various military units with a different background – the officers were mostly from artillery, then there were a platoon of logistic and the main part of the unit was made up mostly by the members of the special forces trained to operate in the rearguard of military action. This type of composition caused quite tight relationships in the whole unit and fragmentation of it into several separated groups.

It has impacted the level of satisfaction with the commander and with the staff as it is obvious from the other slides.

The whole group of our respondents tends rather to introvert type of personality, less sociable, mentally and emotionally mostly stabile.

During mission is possible to notice growing of the somatic troubles, which is the highest in the middle of their deployment. The biggest increase is with mental fatigue, which could be

dangerous for the copying of the duty. It is obvious that short vacation in the middle of the mission is more than necessary.

During mission soldiers more consummate various substance except of alcohol, which is not prohibited but limited. More cigarettes per day was recognized among smokers.

Despite various dynamical developments that were observed from the beginning to the end of the mission, the actual mental state of the Czech soldiers was extremely good for all the time. Every positive issue is above and the negative is under the average population of the Czech Republic.

CONCLUSION

AVERAGE MEMBER OF THE CZECH UNIT KFOR IS MENTALLY STABIL, ACTIVE, RESILIENT AND SELFCONTROLLED. PROFESSIONAL QUALITIES ARE EQUAL WITH THE SOLDIERS OF SOME OTHER COUNTRIES.

ON THE OTHER HAND PEACEKEEPING MISSIONS AFFECT EVERY MEMBER OF THE UNIT AND HIS or HER SUBJECTIVE PSYCHOSOCIAL CONDITIONS ARE DYNAMICALY CHANGING. UNDERSTANDING OF THE DYNAMICAL PROCESSES MAY HELP TO RECOGNIZE NORMAL DEVELOPMENT AND DETECT PATHOLOGICAL SOCIAL OR MENTAL PHENOMENONS AS WELL AS TO IMPROVE "BEFORE MISSION" PREPARATION OR TO ADVISE PSYCHOSOCIAL CRITERIA FOR MAKE UP OF THE UNIT.

Weber Wolfgang: Critical Incident Stress Mangement in the bundeswehr.

Ministry of Defence, Germany

Introduction

To begin with, the attention should be pointed at a report given by Mr. H. Aschenbrenner at the 35th IAMPS at Florence describing the state of art with the special field of Applied Military Psychology (AMP) within the Psychological Service of the Bundeswehr. The paper gave a comprehensive overview on the efforts to train more psychologists in preparation for new tasks due the very new commitment of the Bundeswehr in participating in Peace Keeping operations and/or Out-Of-Area Deployments.

The new fields besides the more traditional tasks of a psychologist as personnel selection, personnel development, clinical psychology, human factors/ergonomics are accompanying contingency forces as a staff officer/special services and in the status of a voluntary military reserve-exercise during deployment

performing as CISM – team-leader

support the Family Support Organization and,

train the soldier in special areas (i.e. stress-coping behavior, self- and buddy-help and, post-deployment activities (i.e. identification of deployment-stress related behavioral changes, re-integration to one's genuine unit).

He pointed out that every psychologist is tasked by the Personnel Office with the secondary task of AMP besides his 'standard' duties. This special assignment was necessary due to the fact that only a very small number of positions for professional applied military psychologists were at hand with the proper training.

However, the situation improved considerably during the last years but numbers are still too small to support the contingent forces during deployment on a continuous basis. They shall be supported by trained other psychologists.

The Task

With the participation of the Bundeswehr in NATO- and UN-missions in early 1993 the Psychological Service was involved in all three phases of the deployment. Helpful was and is the traditional commitment not only of the Bundeswehr to the principles of a high spirit in a strong and healthy body, and a stable and trustworthy emotional environment (Fig 1). However, all activities and amenities to ease the burden of deployment and the strain of prolonged duty hours, crowded living quarters, little privacy, missing friends and relatives, and a highly dangerous working environment have to end when combat readiness is endangered.

Within this framework one of the prominent tasks of psychology is, to provide theater feasible procedures and support to the individual soldier and larger groups, stressed by critical incidents as a term which refers to an event which is outside the usual range of experience and challenges one's ability to cope. Crisis intervention is thought of as urgent and acute psychological 'first aid' the hallmarks of which are

Immediacy,
proximity,
expectancy,
brevity, and
simplicity.

The goals are
stabilization
mitigation,
restoration, and
facilitation of access to a higher level of care.¹¹

The Psychological Service is tasked to establish the necessary provisions, training and proficiencies that the goal of critical incident stress management (CISM) can be met inland and during deployments abroad.

3. The Framework Concept

The **Framework Concept for Stress Management in Soldiers** (Fig 2), released by the Armed Forces Staff, is the basis for all special activities for soldiers in the Bundeswehr. It is understood very easily. Due to its structure it is often called the 'Three Phases – Three Level – Concept'.

The three phases are

Pre – Deployment Activities

Deployment, and

Post – Deployment Activities.

Within each of the phases we differentiate between persons with three levels of expertise, knowledge, competence, and training.

¹¹ Everly, G.S. & Mitchell, J.T.: The Debriefing 'Controversy' and Crisis Intervention: A review of Lexical and Substantive Issues. *Int.J.of Emergency Mental Health*. 2000, 2(4), 211-225

- Level 1: Self- and Buddy Help, Assistance by the superiors and Peers
- Level 2: Military Psychologists, Unit Surgeons, Social Workers, and Chaplains
- Level 3: Medical Specialists, Clinical Psychologists.

4 Pre – Deployment Activities

The different training modules are shown in Fig. 3. The peer-module is for some interest probably: the peer training is a standardized 14 day – course laid out for all three services equally. We decided for this comparable long course due to the experience that the participants first developed difficulties in finding their role and acting professionally. This ‘more’ in role-playing exercises resulted in a much more mature behavior when needed in an actual emergency.

Another organizational idea proved very valuable i.e. the set-up of the Family Support Organization (FSO). Besides a lead office there 18 Family Support Centers (FSC) and 51 Family Support Points (FSP) (Fig. 4). Besides the personnel in the lead office all other positions are filled with competent people which work part-time and besides their assigned duties. However they are on duty with extraordinary enthusiasm, care, and friendliness. They organize meetings for the soldiers and their families prior to deployment and during deployment of course. In a typical pre-deployment meeting a short military briefing is provided, accompanied by a call of the press – officer of the contingent. Videos and slide presentation allow for some insight into the situation abroad and on the campsite. The other services (Psychological Service, Social Service, Accounting, Pay, and Quartermaster, and the Chaplains) introduce themselves and familiarize the soldiers and their families with the network provided for them by the Bundeswehr. A number of booklets, brochures and information flyers provide additional information and help to ease the oncoming strain.

The FSO is due to a significant change: the evaluation during the last years called for a more professional support clearly. The plan is, to establish a FSO with ‘full-time’ personnel, however on a somewhat smaller scale: 36 FSC’s and a floating number of FSP’s due to the dislocation of the contingent forces.

The Psychological Service provides a network of Crisis Intervention Teams (CIT’s). It is organized around the different chains of alarm of the services Army, Navy, and Air Force and the regional distribution of the Bundeswehr as well.

The North of Germany is served by the CIT manned by Navy psychologists and peers. Its home is the Navy Medical Institute and is on duty for any incident of the Navy. The South is taken care of by the CIT of the Aviation Medicine Institute and supports all Air Force incidents too. When incidents happen in the Army then the CI-Team of the Leadership Development and Civic Education Center, Koblenz, shall deploy. The alarmed team could be enforced if necessary on short notice by the attachment of trained psychologists and peers out of the region where the incident happened.

If mass-disaster strikes, the coordinating military surgeon at the place of the disaster will call in the Emergency Action Coordinating Staff/MOD to request the necessary orders to deploy the number of CIT’s that are thought to be necessary. Those deployments would be coordinated by the specialists on the MOD-level.

All actions taken by the CIT or the applied military psychologist follow the sequence depicted in Fig 5 and there are no differences if an incident happens in Germany or during deployment. The timeframe follows 'the books' and own experiences gained in the past. Best results could be achieved with informed and trained soldiers, educated superiors and leaders of course. On the scene of the incident self- and buddy help and the support of the unit leaders is of prominent importance. This helps the stressed soldier to orient himself towards his own coping behavior. Special procedures will be applied through superiors and CISM-trained buddies (peers) in form of a demobilization and/or defusing if necessary.

After two to three days all strained soldiers are called together to receive a psychological briefing. Information of possible individual reactions were given ('common reactions to extraordinary events') and coping strategies and mechanisms discussed. The coping-process shall be explained and the self-healing potential of the attendees activated. The risk of the development of post-traumatic stress effects shall be explained and the resulting risk-assessment procedure introduced. Due to latest research results the psychologist assesses the risk for the development of a PTSD for each individual by evaluating his or hers risk potential. The result of this risk assessment allows the identification of soldiers that belong to the so called high-risk group. The paradigm is, to have no high risk person in a CISD but in a one-to-one-counseling only. In a worst case scenario a victim would be send home for treatment.

If following the sequence of events the psychologist of the contingent keeps track of the individuals stressed by the incident with the help of the superiors and/or buddies and friends. This will not be done in an obtrusive way but out of a fair 'distance'.

Before re-deployment the units receive information to be aware and to cope with their own behavioral changes and those of their friends, relatives or families that stayed behind. The high-risk group is invited to receive a special briefing on post-deployment medical activities which may be necessary. Back home this group has an appointment with psycho-trauma specialists of the nearest Bundeswehr station hospital for a screening session (Clinical Debriefing).

5 Deployment

During deployment stress-coping is supported by a very dense system of different inputs (Fig. 6). The network with the soldier as the center is affording and sometimes competitive. Unit leaders and commanders are the most important persons the soldier has to deal with. In recognizing this fact most of the units have barely any vacant positions expressed for example in the double density of officers in the contingent forces in comparison to the Bundeswehr in general (Fig. 7). The applied military psychologist is staff member and directly responsible to the contingent commander. Sometimes he is accompanied by a senior NCO which peer training and experience.

The reaction to a critical incident follows the same sequence outlined in para. 4 already. It is probably noteworthy that there is no psychotherapy during deployment neither in the camp nor in the military field hospital. If such a treatment should be necessary this would be performed in a Bundeswehr station hospital at home. However, no case has been identified till now.

6 Post – Deployment Activities

As mentioned in para. 4 already, the units are getting information on possible experiences when getting back home before re-deployment. Besides the normal military activities, special and annual leave to recuperate from deployment the Army Command issued Order No. 17 to regulate some activities to ease the way back to normality for the soldier (Fig. 8). The goals is the re-integration in his or hers original unit, to meet old friends again, and to finish up the deployment. In a two-day seminar the soldiers meet in groups up to 20/25 in out of garrison facilities. Moderated by trained NCO's, younger officers, and with the assistance of psychologists, social workers and/or chaplains the group tries to finish up bad experiences, to remember the good times, to exchange experiences, to discuss problems before, during, and after deployment and make themselves fit for normal duty. They work on the following topics:

- During deployment I was especially stressed by
- After being back I was surprised by and
- When going out next time I propose / I shall

In very few cases family members participated in the same group. However, over 90% of the participants called for a restriction to contingent soldiers only. Usually extra meetings were set up in cooperation between the FBO and the chaplains to cope with family related topics especially.

Klose Jiri, Brichein Milan: Stress diagnostic of Cognitive Operations.

*Central Medical Psychology Department
Central Military Hospital Prague
Prague, Czech Republic*

Summary

In the paper authors refer about new developed psychological method which is used in psychological assessment of military specialists in the Army of the Czech Republic. Statistical data about the method and norms for individual categories in which the test sensitively distinguish (for example military drivers, military guards, members of foreign missions) are shown. The test is modern, constructed as a tool which gives results in complex. It measures both the level of the efficiency of cognitive operations under stress conditions and also make possible to obtain some information about selected personality characteristics – for example motivation, self-regulation, the strategy of solution procedures. Statistic correlation to intellect and to some selected clinical factors (for example neurotic symptoms) are also shown. The test is constructed as a visual searching CAT with the changing organization of experimental conditions.

The human resources of all organizations are the most important and valuable because it depends on them how the other resources will be used. Militaries are the organizations where the use of the human potential has long tradition. However, as the time goes the demands on different professions have changed and increased also in the postmodern time. The right selection of

proper people for important duties and the prediction of their individual success especially in stressful situations became the crucial things.

In such defined problem the success of its effective solving is connected mainly with the quality of selective methods. By the way, the develop of the right psychological diagnostic methods(tools) that respects all demands of present and future, is very difficult.

We know that generally known trouble of the psychological diagnostic results from the character of mental events: the direct observation is impossible and they are also very variable (not only in inter-individual but also in intra-individual differences). There are only two characteristics in the field of mental events that can be directly measured: the frequency of appearance and the duration of these events. The other quantitative signs (grade, degree, extent, intensity level) can be measured only by non-direct measurement of external appearances of mental processes and conditions (Brichcin, M., 1999). Besides of that: all psycho-diagnostic tests are used for practical usage, but they put the probands into artificial situations. That is why the new theoretical knowledge how to control and regulate human activities is used, searching intermediary relations between situational demands and concrete mental processes. It is not about the simulation external situations, but about influence the specific demands on internal factors and functions, that are the object of the diagnostic work (Brichcin, M., 1999).

In our report we want to show one particular approach to the tasks that military psychologists face in their everyday praxis. We present the new test that measure cognitive processes under stress condition. This test was developed in the Central medical psychology department in the Central Military Hospital Prague. The test will be in these days offered on psychological market by means of the firm Testcentrum, the Czech branch of Hans Huber and Hogrefe Verlag.

During the procedure of develop new diagnostic tool we used both modern knowledge of the test construction and very accurate description of demands which is laid to armies in the new millenium.

Concerns new test, we knew that we have to make identification of the important conditions of mental efficiency in the stress situations. Simultaneously our main aim was to develop modern adaptive test which respect progress in the field of psychometric methodology. Principles of the cognitive psychology and new experiences with self-directedness regulation of mental processes were the theoretical starting point. Duration of time period between presentation of stimulus and announcement of found target is influenced not only by promptness, perception and attention functions, but also short-time (operational) memory, learning ability, will and intellect (the searching strategy).

In addition to we tried to afflict more observed factors in one test. That is why we were not concentrated only on global psychological factors, but also on special functions: first of all on operational memory, self-regulation, stress resistance, adaptability, flexibility, ability to produce the heuristic procedures of tasks solving.

In the field of demands on up to date military we went from many strategic studies, that on the threshold of the 21st century define the basic visions of militaries of the new millennium;

creating the test we respected then the specific demands on the soldier professional, as they were formulated in these studies. It is obvious the soldiers of the 21st century will face new demands. These demands are based on the fact that the character of the missions will be changed and on very demanding operating with new, sophisticated military technology. Speaking about the missions, it is expected that the soldiers will be deployed in the regions where different ethnic groups are and the culture conflict can occur. These missions will demand high level of flexibility, integrity and hardiness of the whole staff. The new technologies will be based especially on basal widespread of computerization of many activities, on the development of sophisticated devices and preponderance of digitalization of informational environment. The essential break point will manifest in the field of information: especially in *coding and decoding of the signs*. These information will in their diversification, the level of encumbrance and changeableness in time mean new complexity of tasks which quantity an importance will rise exponencionally (Rumsey MG, 1999).

First rate ability to manage these and other orders in rapidly changing military environment will be from the psychological point of view connected with level and quality of many inner factors. Some of these factors can be emphasized. Getting on that the duty of modern soldiers will be more complex, less proceduralized we can come to prompt and quality judgement connected with irrevocable decision, very often nonstandard. It is obvious that the most important elements will be cognitive level, analytic intelligence and mental operations, stability and reliability of general mental performance under stress conditions, ability to generate strategies of problem solving, the decision processes, aim- focused-motivation and discipline.

Development of the test was made in the Central Medical Psychology Department of the Central Military Hospital Prague. The test followed on the results of individual psychological examinations of person (N =700) that was made by method „Numeric Square“. This method belongs to category of searching tasks.

The method is based on searching for specific signs (numbers). The test is divided in to five sub-tests. Sub-tests 1,3,5 have no time limits: proband searches for the specific sing until he is successful. Sub-tests 2 and 4 evoke the stress situation because they have time limits. The proband have to find a target in certain time and if he is not successful he obtains a new sign. The sub-tests last the same time 6 min., so the whole test takes 35-40min. The CAT system is used to administration and evaluation of the test.

For the collection of research data 2000 in age-homogenic group of men from different military platoons of the Army of Czech Republic were tested. From the military professions were chosen: military drivers, military guards, and soldiers which were applying for participation in missions.

We can mention only some results we discovered by testing.

First at all it was approved that the processes of „Visual Scanning“ were intentionally regulated. It means that simple behavioural explanation of these processes should not be adequate. The solution of „Searching Tasks“ is quite difficult mental activity that cannot be simply described as a human reaction on presented stimuli. For the interpretation of „Visual Scanning“ processes have to be used the new knowledge of „Cognitive Psychology“. It was approved again that we

could not interpret the parameters of performance during the searching tasks only in relation to the functions of perception and attention. Only the complex cognitive operations and learned intellectual skills are used during the searching for certain objects that are in covered visual field.

During the analysis of time duration of searching for the targets in the structure of the numeral square we found out that the individuals - disregarding their individual differences - had found the target localized in the upper left part side of the square much faster (in shorter time) than the objects situated in opposite part of the square (Fig. 1a). We also found out another even impactiver fact: the longest time duration took to find numbers that represent the highest values. It means it lasted much longer to find the number that began with 9 than the numbers that began with 1. (Fig. 1b) We explain this fact this way: if a man have to find some objects or symbols in unknown visual field he usually starts to scan the field according to his „Reading Habits“ and along with this he puts the semantic meaning to signs he percepts. We can expect that people regulate their cognitive activities in different occupational or life situations analogously as in „Visual Scanning“. This discovery should be used during the construction and usage of the simulators. On the other side if the person does not search the objects according to some system we can expect that this person has low effective cognitive functions or that he suffers from some neuropsychological disorders.

The main information we acquired from the average number of found targets. These objects were found or were not found in 5 sub-tests (Fig. 2). First and foremost it was approved that if the sub-tests had been repeated the number of found objects had risen up. On the other hand if the period of targets presentation was limited (while the time duration of the sub-test was stable) the number of found objects decreased. These changes were congruous in all tested groups. The differences were only in dimension of discovered changes. Very good results were seen by SFOR soldiers: they found most of the objects when the period of targets presentation was no limited, they have the lowest score in not found objects (in period with limits) and the lowest difference between the individual performance. When the sub-tests were repeated the group of drivers made the best improvement. Group of „Guarding Service“ made the smallest improvement.

The average time that was needed for searching of the objects is another important indicator of changes in cognitive processes „Visual Scanning“ which were tested by this method (Fig. 3). The differences between groups in average time of searching for objects were 15,4%. But if the conditions during the test were changed the differences were 36,0%. We have to emphasize that if the mental load increased the number of found objects was smaller; but on the other hand the speed of searching of the objects was faster. This apparently paradoxical statement proves: in situation with higher mental demands the majority of tested individuals were able to increase their motivation, to make their cognitive processes more effective. It is interesting the SFOR group had the shortest time of finding objects both in the sub-tests without limits and in the sub-test with limits.

Thanks to the computers we could record the times parameter of every single person. That is why we could evaluate the variability of individual time parameter in every sub-test (Fig. 4). This possibility is important because the parameter of the variability of time fluctuation is an objective indicator of the dynamics of psychological (emotional) states. About the sensibility of

this method refers the fact the method disclosed the differences of average values of time-parameter between the groups. People from the SFOR group were according to the variability of this indicator on the first place (in the tests without limits) and second (in the tests with limits). It meant that their emotional states was much less variable in comparison to another groups of men. The lowest emotional stability was found by Guarding Service and the Castle Guard manpower. The difference between guard groups and SFOR were 19,7% and 19,1%.

Interpretation and analysis of the test are based on - except of two rough scores - 16 quantitative records (Fig. 5).

From the point of view of the psychological diagnostics of the individual are the differences between groups obviously not so important as the differences between the individuals within one group. The discriminative power of the method we can evaluate according to the range of minimal and maximal values and the size of standard deviation of individual parameters (Fig. 6).

We compared our method with another, in frame of correlation studies. The biggest correlation coefficient was found with tests of intelligence - Raven, WMT and OTIS and with the test of operational memory and attention (TOPP) (Fig. 7). The low correlation was found in questionnaire methods - TCI, SCL, PPP.

The test of cognitive processes in stressful situations we found as a very useful and reliable method; it is sensible for diagnosis and analytic evaluation of effort during the stressful situations of an individual. The test can be used by professionals, who select the soldiers for the military professions. If we compare the results we got from the test with the group of neuropsychological patients we will obtain a new approval of our hypotheses that it is possible to diagnose organic disorders.

Fig. 1a The sequence of found targets – according to average searching time /</u>

N = 2161

	11	22	33	44	55	66	77	88	99	00	
1	20		2	22	19		10	7	24	29	a.
2	8	5	39		31				1		b.
3	9	4							38		
4	6	25							11		
5									33	40	
6	23	16							26		
7	15	3							27		
8	14	37							30	28	
9				17	34	13				21	c.
0		12	36		18	35			32		d.
	i.	j.						y.	z.		

82

The sequence of numerical symbols according to the ordinal numbers of the found targets (see above)

averages in rows: a.=16,6 b.=16,8 c.=21,3 d.=26,6
 averages in columns: i.=13,6 j.=14,6 y.=24,7 z.=29,5

Fig. 1b The sequence of found targets – according to average searching time

average target searching time	sequence according average time	numerical symbols found
7,54	1	16
7,56	2	37
8,33	3	34
8,74	4	44
8,92	5	27
9,09	6	62
9,57	7	63
9,60	8	80
9,62	9	12
9,64	10	42
9,99	11	33
10,14	12	41
10,15	13	40
10,37	14	45
10,48	15	75
10,53	16	90
10,74	17	19
11,01	18	89
11,74	19	29
12,48	20	91
12,50	21	86
12,75	22	72
12,79	23	56
13,07	24	22
13,25	25	98
13,55	26	43
13,87	27	85
14,32	28	23
14,52	29	18
14,66	30	87
14,65	31	76
14,85	32	54
15,22	33	51
16,39	34	64
16,89	35	96
17,35	36	92
17,46	37	94
17,52	38	93
17,78	39	97
18,60	40	95

Fig.2 Number of found and not-found targets

Groups		Parameters signs (see "Abbreviations")						
(N)		DG 1	DG 2	DG 3	DG %	DG 4	DG 7	
1.	Castle Guard N = 391	M s	27,51 6,59	25,09 7,84	2,79 3,88	10,14	4,17 5,57	21,50 7,90
2.	Guarding duty N = 533	M s	27,75 6,22	25,78 7,76	2,29 4,32	8,25	3,57 5,28	20,81 7,92
3.	SFOR N = 174	M s	30,89 5,51	27,99 6,72	3,22 3,78	10,42	4,17 6,02	19,29 6,90
4.	Drivers (conscripts) N = 789	M s	28,16 5,67	25,73 6,85	2,73 4,13	9,69	4,48 5,28	20,87 7,05
5.	Drivers N = 92	M s	28,02 5,99	25,23 7,34	3,09 3,60	11,03	3,89 3,60	22,67 8,22
6.	Other bodies A = 176	M s	30,96 6,12	29,24 7,49	1,98 4,28	6,40	4,25 5,04	17,39 7,18

Abbreviations:

DG 1 : number of found targets in sub-tests WITHOUT limits

DG 2 : number of found targets in sub-tests WITH limits

DG 3 : sumarization of individual changes: DG 1 minus DG 2

DG % : percentual formularization of changes DG 3 (100%=DG 1)

DG 4 : difference in number of targets found in V. sub-test minus I. sub-test

DG 7 : number of not-found targets in sub-tests WITH limits

N : number of people in groups; M : average values

s : standard deviations

Fig. 3 Times of target searching

Groups		Parameters signs (see. "Abbreviations")				
(N)		DG 8	DG 9	DG 10	DG %	
1.	Castle Guard A = 391	M s	133,8 32,0	85,7 12,0	48,0 27,0	35,95
2.	Guarding duty A = 533	M s	132,3 33,8	85,8 11,1	46,5 29,3	35,15
3.	SFOR A = 174	M s	118,4 21,0	82,7 7,3	35,6 18,3	30,07
4.	Drivers (conscripts) A = 789	M s	130,1 27,4	84,3 8,3	45,8 24,5	35,20
5.	Drivers A = 92	M s	131,8 29,6	84,3 7,1	47,5 21,1	36,04
6.	Other bodies A = 176	M s	117,9 23,3	83,8 10,4	34,1 20,3	28,92

Abbreviations:

DG 8 : target searching times in sub-tests WITHOUT limits

DG 9 : target searching times in sub-tests WITH limits

DG10 : sumarization of individual changes: DG 8 minus DG 9

DG % : percentual formularization of changes DG10 (100%=DG 8)

N : number of individuals in groups; M : average values

s : standard deviations

Fig. 4 Variability of searching times

DG 11 DG 12				
1.	Castle Guard	M s	66,6 22,0	26,0 9,9
2.	Guarding duty	M s	66,9 24,5	26,5 8,0
3.	SFOR	M s	55,9 15,2	24,7 4,6
4.	Drivers (conscripts)	M s	65,3 20,9	25,4 5,1
5.	Drivers (other)	M s	64,0 21,0	24,3 4,0
6.	Other bodies	M s	56,5 18,0	25,8 6,6

Abbreviations:

DG11 : variability of times in sub-tests WITHOUT limits

DG12 : variability of times in sub-tests WITH limits

M : average values

s : standard deviations

Fig. 5 **Kvantitative results of individual assessment by T Z D K O method**

selection of 16 indicators

- DG 1 - number of found targets in sub-tests WITHOUT limits
- DG 2 - number of found targets in sub-tests WITH limits
- DG 3 - sumarization of individual changes: DG 1 minus DG 2
- DG 4 - difference of occurrences in two sub-tests V-I
- DG 5 - total number of faults in sub-tests WITHOUT limits
- DG 6 - total number of faults in sub-tests WITH limits
- DG 7 - number of not-found targets in both sub-tests WITH limits
- DG 8 - average target searching time in sub-tests WITHOUT limits
- DG 9 - average target searching time in sub-tests WITH limits
- DG10 – difference of average times DG8-DG9
- DG11 – average variability of times in sub-tests WITHOUT limits
- DG12 - average variability of times in sub-tests WITH limits
- DG13-1-difference in target occurrences in sub-tests II-IV
- DG16-1-difference in average searching times in sub-tests II-IV
- DG17-1-difference in variability of times in sub-tests II-IV
- DG30 – listing of self-evaluation

Fig. 6 **Descriptive statistics of the whole sample**

N = 2155

	Mean	Median	Std. Deviation	Minimum	Maximum
DG 1	28,3290	28	6,1424	10	54
DG 2	25,9736	25	7,5489	7	57
DG 3	2,6701	3	3,8147	-10	21
DG 4	4,1032	4	5,3475	-13	26
DG 5	0,5243	0	1,6668	0	61
DG 6	0,5201	0	1,2151	0	41
DG 7	20,8047	20	7,7748	1	54
DG 8	1297,79	1249	301,3896	662	4696
DG 9	846,5030	837	98,2548	559	2201
DG10	450,4529	402	260,8397	-58	3742
DG11	646,0153	606	219,3965	237	2746
DG12	256,4789	247	69,5300	127	1765
DG131	-2,1911	-2	5,6611	-22	17
DG161	73,9972	65	125,3925	-566	1877
DG171	26,3380	13	120,3329	-755	2298

Fig. 7 Some correlations of T Z D K O method

N = 2155

	TOPP	VMT	OTIS	RAVEN
TZDKO – occurrences of found targets SUB-TEST I	0,48	0,30	0,29	0,34
SUB-TEST II	0,46	0,21	0,27	0,38
SUB-TEST III	0,46	0,27	0,25	0,38
SUB-TEST IV	0,48	0,24	0,23	0,25
SUB-TEST V	0,46	0,26	0,17	0,32
DG 11	-0,45	-	-	-
DG 12	-0,048	-	-	-
DG 7	-0,46	-	-	-

Abbreviations:

- DG 11: variability of times in sub-tests WITHOUT limits
 DG 12: variability of times in sub-tests WITH limits
 DG 7: total number of not-found targets in both sub-tests

Mladen Trlek: Risk Factors of Military Discipline Violation.*Ministry of Defence, Croatia.*

In the military environment, specific for the horizontal and vertical hierarchy, formalised daily procedures and insisting upon conformism and effectiveness, deviated behaviour by individuals and groups is especially visible. Discipline violation in the military is dealt with through prescribed sanction procedures and clearly defining non-acceptable behaviour. Despite prevention measures, discipline violation in the military (characterized by disobeying regulations and legal norms in general) by military personnel while on duty or after, remains a specific problem requiring extra attention for at least three reasons:

direct effects (death, disabledness, material damage, time lost..)
functioning (trainedness, cohesion) disrupted
attitude towards the military (incidents reflecting on public opinion, community)

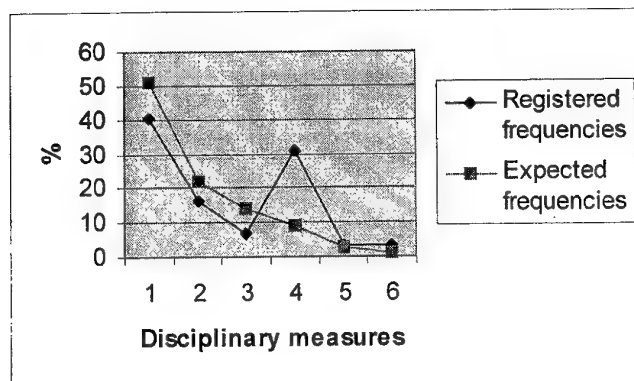
General features of discipline violation

Daily unit functioning puts situationally-determined adaptational demands before individuals and groups, the demands that vary with the situation. Despite the efforts by the military to predict situations, it is still faced with the need to improvise and with time constraint, often aggravated by limited resources and unexpected situations. Such uncertainties and possible motivation changes may loose the discipline, manifesting in demand of greater comfort and accepting decreased efficiency and performance as satisfactory. Those however are minor and not prosecutable instances.

In other cases safety, behaviour norms, regulations and legal norms are violated which leads to incidents with extensive impact, that, unlike the abovementioned, are always registered and sanctioned through discipline measures.

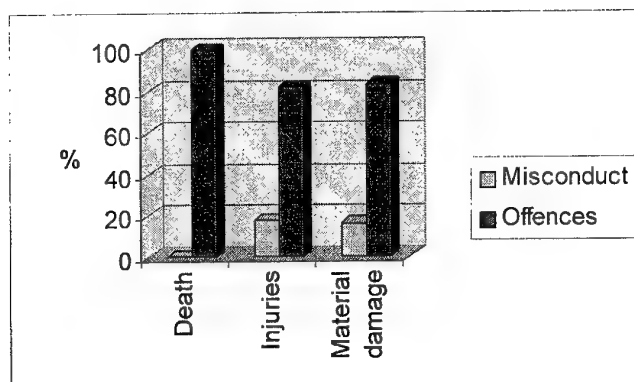
Discipline violation with respect to severity has a characteristic distribution characterized by frequent minor instances (unproper appearance or wearing of uniform, oversights); expectedly criminal acts (e.g. murders) are the rarest. As distribution of disciplinary measures reflects the extent of discipline violation in a unit, the author set to compare the expected distribution of discipline violation acts with distribution of disciplinary measures in the unit over a 5-year period.

Figure 1. Expected and registered distribution of disciplinary measures in a unit over a 5-year period



Bi-modal distribution of disciplinary measures (arranged by severity 1-6) justifies the categorization of discipline violation instances into two different groups with different causes - misconduct - mostly occurring while on duty, with minor effects, and offences, often occurring in the after hours, with more severe effects and consequently sanctioned harder.

Figure 2. Direct effects of misconduct and offences



Misconduct instances were sanctioned by measures 1, 2 and 3, while offences were responded to by measures 4, 5 and 6 respectively (see fig.). An earlier study by the author did not find statistically significant difference between the sanctioned and non sanctioned soldiers respect to personality characteristic. We may conclude that misconduct is not necessarily a sign of maladaptive behaviour, but may rather result from circumstances and reactions to the circumstances.

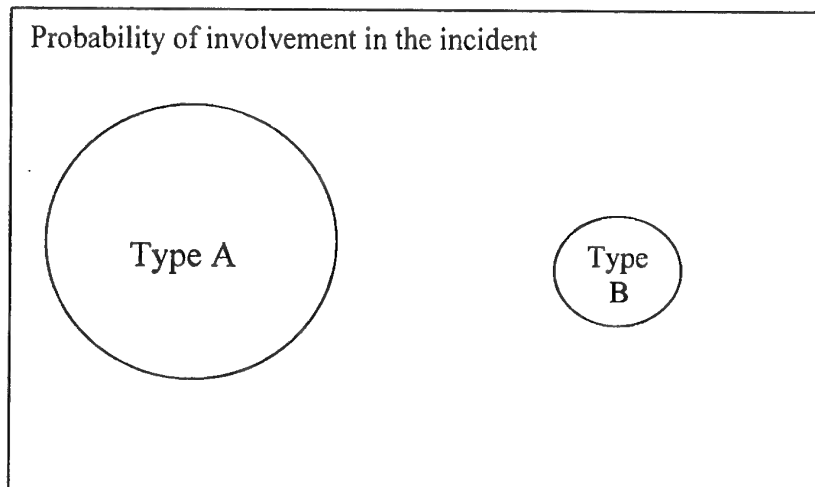
Over a last years harder violations, to distinguish them from the smaller, have frequently been referred to as "incidents". The critical difference between incidents and "accidents"

considered while setting the sample, lies in the fact that accidents imply no direct responsibility determined for the event, whereas in the case of incidents the responsibility is determined. This paper will focus on severe violation as a separate category, on the protagonists, and will try to determine what the risk factors are.

Model - hypothesis on occurrence of incidents

Observing the incident case by case may be perplexing, but in the context of overall behaviour of individuals committing them, risk factors for a number or the majority of incidents could be determined. Bearing in mind that the subjects incur sanction for the consequences of incidents, and that registered incident constitutes a registered discipline violation (whereas the protagonist may have taken part in a series of similar events), the author saw justified the hypothesis on maladaptive behaviours repertory.

Figure 3. Maladaptive behaviours repertory with respect to probability of participating in an incident



Registered incident is but one manifestation of maladaptive behaviours. It is quite assertable that one and the same individual took part in a series of events or situations that could have led to incident without being registered. The more situations, the greater the probable incidence of the type A individual among the incidents' subjects. Individuals with restricted repertory take part in fewer risky situations, whereby the probability of taking part in the incidents is far smaller or almost zero, corresponding to the type B individuals.

Study goal and problems

Determine main features of severe incidents committed by the unit members

Determine socio-demographic differences between of incidents subjects with respect to overall unit personel

Determine differences between the control group and incidents subjects group with regard to growing-up conditions, present living problems, the burnout syndrome extent and the overall score on the LASC-01 scale

Results and discussion

Table 1. Main features of incidents over a 5-year period

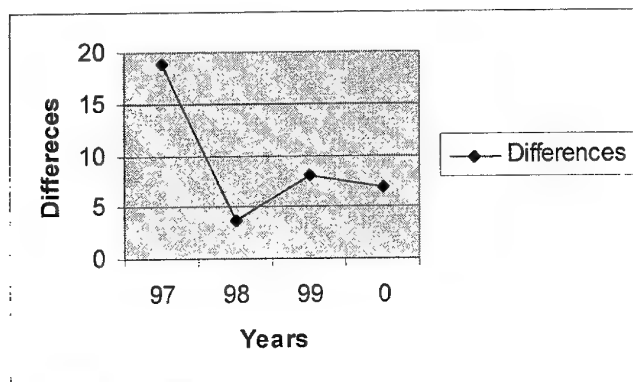
Violation of public order, physical and verbal conflicts with minor effects	Harder conflicts using the weapons and with severe effects	Traffic accidents	Criminal acts(frauds)	Work-induced injury	Other
44,7%	13,4%	16,9%	8,6%	8,6%	5,6%

Registered in 64,6% cases, alcohol abuse is obviously is the most pronounced feature of the incidents. The large incidence of conflicts(58,11%) refers to alcohol abuse and violent behaviour as main features of incidents, which in turn justify hypothesised specific factors underlying the problem, that have to do with socio-cultural patterns of behaviour, and with the post-war period (e.g PTSD, war experience, living problems, acute crises or problems and job overload).

Age

Difference between incident protagonist group and overall sample in age is not statistically significant.

Figure 4. Weighting the differences in the average age of incidents subjects and the overall sample.



Marital status

As expected, married soldiers take proportionally significantly less part in incidents, they act with greater responsibility, and display desirable behaviour in response to sanction or

ammonition. With regard to distribution of marital status categories in the overall unit personnel, unmarried soldiers take significantly bigger part in incidents.

Figure 5. Marital status of incidents subjects with respect to the moment of committing(year)

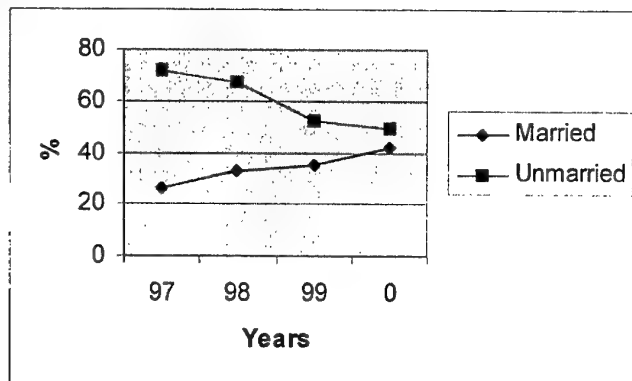


Table 2. Statistical significance of differences in marital status of incidents subjects and overall unit personnel with respect to time moment(year)

Year	1997	1998	1999	2000	Total
X2	26,6	18,2	29,6	14,8	89,2
Significance	P<0,01	P<0,01	P<0,01	P<0,01	P<0,01

As the Table 2. Shows, unmarried soldiers take statistically significant bigger part in incidents than was expected, with regard to their proportion in the unit.

Education level

Participation of lower-education soldiers in incidents was higher than expected in view of the proportion in the unit personnel. On the other hand, incidence of high-educated members among the incident protagonists was lower than expected.

Figure 6. Differences in participation of individual educational categories with respect to the overall unit personnel

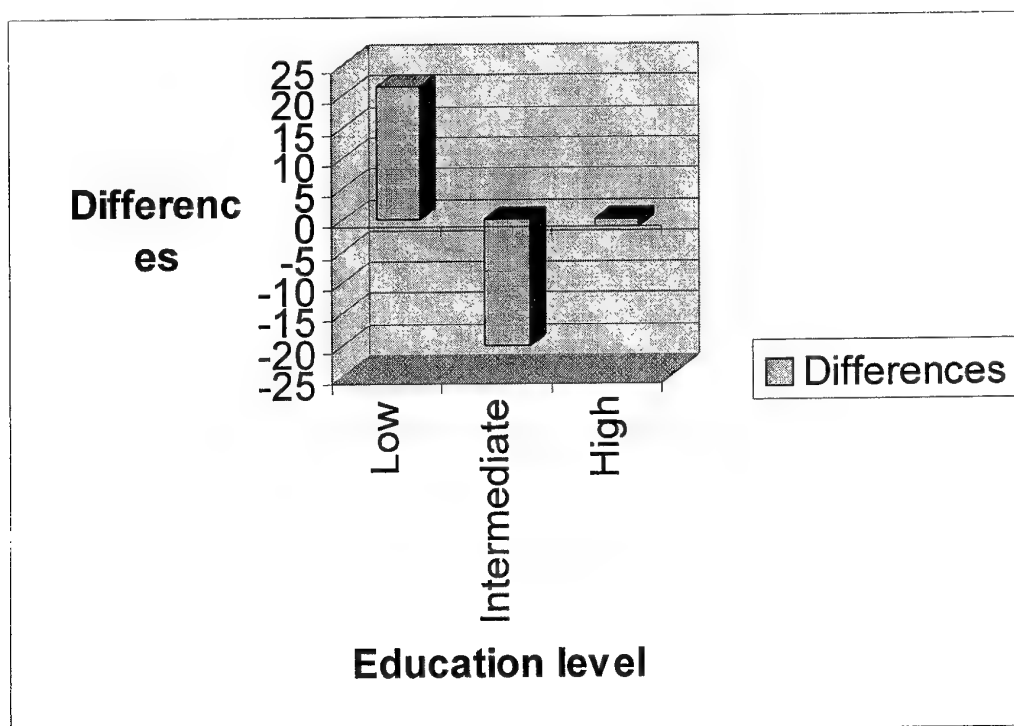


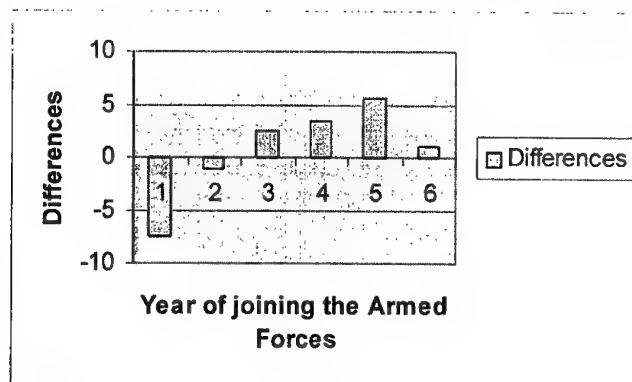
Table 3. Statistical significance of education categories between a group of incident protagonists

Educational level	Low	Intermediate	High
X2	60,9	22,3	1,45
Significance	P<0,01	P<0,01	P<0,10

Length of service in the Armed Forces

The sample of incidents protagonists was divided into 6 categories depending on the date of the joining the Armed Forces (with group 1 made up of members joining the Armed Forces upon the outbreak of the war, group 2 of those coming the following year etc.). Time spent in the service is but a rough indicator of exposure to war traumas. The significance of difference in frequencies among the categories was tested in view of possible role of post-traumatic disorders in incidents occurrence.

Figure 7. Distribution of differences between the incidents protagonists and overall sample



Positive difference implies higher incidence of incident protagonists within a category, while negative difference found in the first and the second category means higher proportional incidence in the overall sample. In comparison with expected distribution between categories it was found statistically significant difference (chi square = 22,9; $P < 0,01$). Individuals with shorter service regardless of combat experience have been found more involved in incidents, which is attributable to the age, life-style and adjustment factors.

The results of the study of socio-demographic features of incidents protagonists point to the following features isolating them from the overall population- low education level, shorter time in service, single (no family) status and lower age. Considering the main features of incidents contained in the Table 1., comparison with the "discipline violators" manifesting violent behaviour appears justified. Šimunec (1979) defines law breakers as "younger, unmarried, low-educated persons".

As for the length of service, some factors of socialisation and developed system of reward and sanctions could do much to facilitate general adaptation and prevention of conflicts and risk situations in general. A recent study by Zelić et al. (2001) on attitudes towards alcohol and illegal substance use throws more light on the results revealing younger and lower-class individuals ignoring the harm of alcohol and illegal drug use, which could be associated to the sample of incidence protagonists and the conditions of incidents themselves, as alcoholism has been detected in 64,6% cases.

The second part of the study analysed the data on incidence protagonists in 1999 and 2000. Respectively, with 79% of them for the period treated individually. The same procedure was applied on a stratified sample of the overall unit sample, for a valid comparison of results.

Growing up in difficult conditions

The following features up to the age of 16 were taken as indicators of growing up in difficult conditions:

- One or both parents treated for alcoholism or mental illness
- One or both parents serving long term prison sentence
- Death of one or both parents
- Parents divorced

Growing up parentless or in foster homes

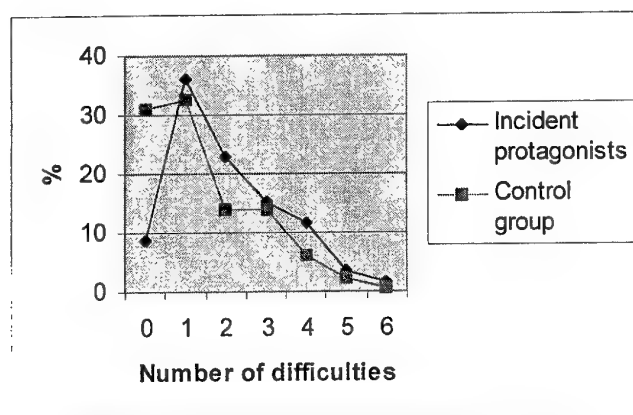
Incident protagonists were found more frequently to experience at least one of the features (total 52,2%). In the control group minimally one feature was found in 30,5% cases. Frequencies were then grouped among the variables. The common factor of difficult growing-up were parent treated for alcoholism or mental illness or serving a long-term prison sentence or the broken-home history. With regard to the first common factor no significant difference was found in frequencies between the incident protagonist group and the control group. Chi-square = 1,82 is not statistically significant.

With respect to the second common factor (broken home history), statistically significant difference was found in frequencies between the incident protagonist and the control group (chi-square = 28,8). The broken home history was significantly more present in the incident protagonist group. The data, however, are not sufficient to suggest the explanation to this. Several hypotheses exist based on studies of the influence of family situation on an individual's behaviour. Earlier studies (Shaw & McKay, 1931; Glueck and Glueck, 1950) revealed an almost linear causal relationship between delinquent behaviour and growing-up in a broken home. Later studies on delinquents and violent individuals (Todorović, 1966; Momirović & Bosanac, 1974) supported the fact on law-breakers coming largely from broken families or from families with parents serving long-term prison sentence, treated for alcoholism or mental illness.

Living conditions during the last two years

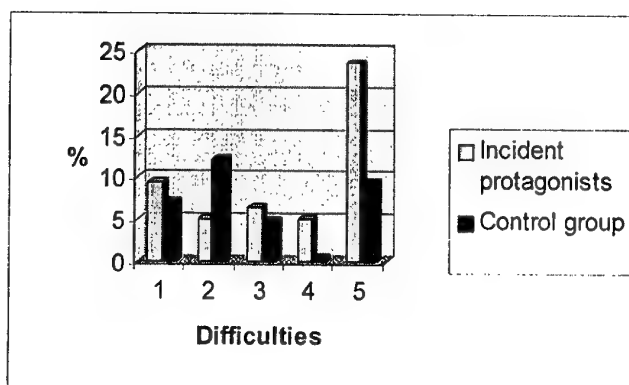
Respondents in both groups were able to report the difficulties encountered over the last two years (10 of them), the data which later helped direct interviews.

Figure 8. Relative frequencies of respondents in the incident protagonist group and the control group with respect to number of difficulties reported



Incident protagonists reported more difficulties (2,05 on average) compared to the control group (1,42 on average). The difference in the number of difficulties reported tested by means of t-test ($t=3,25$) was statistically significant at the level $P<0,01$. Incident protagonists reported on average significantly more living and other difficulties faced over the last two years compared to the non-incident group.

Figure9. Differences in relative frequencies between the two groups with respect to difficulties types

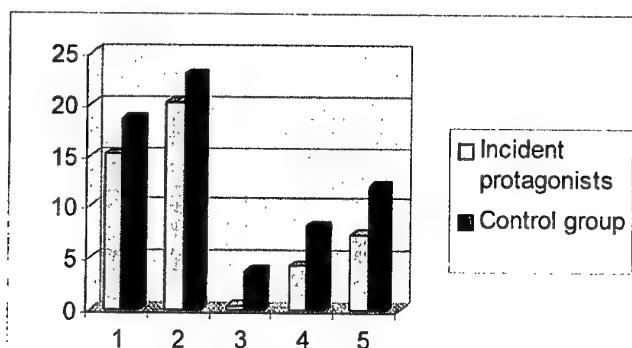


Difficulties - disrupted relationships

- 1.Divorce
- 2.Quarrel with friends
- 3.Quarrel with relatives
- 4.Criminal charge
- 5.Minor offence charge

Except for one item (quarrel with friends), in the incidents protagonists group featured more difficulties in the relationships with their environment. Thus, over the last two years they committed minor offences (in traffic etc.) with consequential court procedure, which was much less the case in the control group. This finding supported the hypothesized higher proneness to risk situations by incident protagonists.

Figure 10. Differences in relative frequencies between the two groups with respect to the type of difficulty



Difficulties - objective difficulties

Financial difficulties

Actual housing problems

Severe physical injury

Major illness

Major illness or injury of a family member

A seeming difference in difficulty type between the two tested groups was found. In the incident protagonist group proportionally more difficulties of the type "disruptive relationships" were detected, whereas in the control group there were relatively more objective difficulties.

Burnout syndrome, overall score on the LASC Questionnaire

Table 4. Mean values of scores of the two groups on the burnout syndrome scale and the LASC Questionnaire-total on the PTSD items too

	CONTROL	GROUP	INCIDENT	PROTAGONISTS	
	M	s	M	s	t
Burnout syndrome	29,81	9,294	27,90	8,848	2,34*
LASC total	25,92	20,087	30,18	30,329	1,27
LASC PTSD	13,03	10,053	14,24	14,758	0,74

Statistically significant difference between the mean values on the burnout syndrome scale between the two groups could be a result of unit deployments preceeding the data collecting. The data of the incident protagonist group were being collected continuously over a 2- year period, whereas those of the control group were being collected periodically, whereby the deployment had no noticable effect on the scale. As for the remaining two variables, there appears to be no significant difference between the two groups, but in view of the intent to determine risk factors of discipline violation the numbers of respondents meeting the PTSD diagnostic criteria in each group will be compared.

Table 5. Number of respondents meeting diagnostic criteria for PTSD in the incident protagonist group and the control group respectively

	Control group	Incident protagonists
PTSD	12	17
%	9,2%	15,0%

Difference is not statistically significant (chi square = 4,19).

Conclusions

The socio-demographic differences found between the incident protagonist group and overall sample suggest the probability of risk factors with respect to involvement in incidents. Socio demographic features of incident protagonists point to similarities with the law-breaking population manifesting specific violent nature and minor offences. Lower age, education status, illegitimate child status and shorter time in service could be indicators of a specific life-style related to the free time. Also inferior general adaptation is indicated to lie in the background of incident-prone behaviour.

Second part of the paper was primarily determined by directing of psychological assistance to individuals in crisis, so the data on the incidents protagonists are not explanatory enough. However, they seem to agree fairly with the data from the first part. To conclude with, risk factors of severe violation of military discipline seemingly have been found, and overall findings have been summarized in Table 6.

Table 6. Low-risk and high-risk factors of severe violation of military discipline

LOW RISK		HIGH RISK
Mature	Lower age	
Married		Unmarried
Intermediate and high education level		Low education level
Fewer living and other difficulties		
		Grown-up in broken family
No minor offences nor criminal charges over a 2-year period		Minimally minor offences in the 2-year period
	PTSD	

The basic hypothesis on the incident occurrence model underlining risk factors as possible sources appears confirmed. Although this helps tailor prevention of incidents to other populations and behaviours, future research will have to be directed towards situational variables and personality variables that might provide through explanation of incident-prone behaviour.

Literature:

Glueck, S., Glueck, E., 1962. Family Environment and Delinquency. London.

Momirović, K., Bosanac, G., 1979. Sociološka obilježja nasilnika, Zbornik radova, Krivičnopravni i kriminološki aspekti delikata nasilja. Zagreb.

Shaw, C.R., Mc Kay, H., 1931. Social Factors in Juvenile Delinquency. Report on the Causes of Crime, Bd. II. National Commission on Law Enforcement and Observance.

Singer, M., Mikšaj-Todorović, Lj., 1989. Delinkvencija mladih. Globus, Zagreb.

Šeparović, Z., 1981. Kriminologija i socijalna patologija, Zagreb.

Šimunec, S. 1979. Demografska obilježja nasilnika, Zbornik radova, Krivičnopravni i kriminološki aspekti delikata nasilja. Zagreb.

Trlek, M. 1994. Kazne i nagrade u jednoj postrojbi Hrvatske vojske, priopćenje, II Konferencija hrvatskih psihologa, Zadar.

Zelić i sur. 2001., Rezultati primjene upitnika SO i UIO na uzorku pripadnika oružanih snaga Republike Hrvatske

Marek Preiss¹, Havlíček, J.², Flegr, J.², Jiri Klose³: Influence of latent toxoplasmosis on some personality and performance parameters on conscripts.

1) Prague Psychiatric Centre
Czech Republic

2) Department of Parasitology, Faculty of Science, Charles University
Prague, Czech Republic

3) Central Military Hospital Prague
Czech Republic

Summary

Toxoplasmosis gondii is known to induce specific behavioural changes in its intermediate hosts. Prevalence of latent toxoplasmosis in most countries varies between 20-80 percent. Recently published data suggest that personality profiles of Toxoplasmosis-positive and Toxoplasmosis-negative subjects differ in specific ways. In this double blind study we search for symptoms of deterioration of mental health of infected people in large sample of conscripts (N= 975). Subjects were tested by Cloninger's Temperament and Character Inventory (TCI, Cloninger et al., 1994), verbal and visual intelligence tests and by other methods. We discuss the influence for mental health of conscripts and further research. The results suggest that the latent toxoplasmosis could in fact be a serious and underestimated medical problem.

Our work tries to show how little and hardly measurable psychological problems may result from biological, until recently neglected factors.

Protozoon *Toxoplasma Gondii* seems to be the most extensive human parasite in developed world and its prevalence depends particularly on dietary custom practice and flows about tens of per cent of mature population. In the Czech Republic it is about 30% in the long term, in Germany and in France even 70% and in many African countries even 90%. Under common circumstances we never get knowledge of this life companion (Flegr and Havlicek, 1999). The majority of infected individuals makes up bearers of latent forms of infection, i.e. individuals who do not show any clinical symptoms and who are bearers of sleep form of the parasite.

Research works have proved that the parasite is in tissue cysts of hosts, where the protozoon is in sleep form, does not remain passive, but affects host's behavior. Infected mice are timid, they have worse neuro-muscular co-ordination and slower avoidance reflex. Thus they have deteriorated alertness in the face of predators.

Recent results of comparative studies showed, that individuals with latent toxoplasmosis differ from individuals without it in values of certain psychological factors.

Flegr, Hrdá and Havlicek (1999) found out differences in personality profile of toxoplasmosis-positive individuals compared to toxoplasmosis-negative ones in Catell 16PF and shift from extreme attitudes towards the center.

Flegr and Havlicek (1999) carefully mention hypotheses about instrumentality of neuromodulator, apparently dopamine, in changes of behavior of infected individuals.

Havlicek (2001) found out positive correlation between lengths of infection and latency of reactions, which shows enhancement of slowing down of reaction-speed with the duration of the infection. In three minutes latency test he found out slowing down of toxoplasmosis-positive individuals in the second and third minute.

This seemingly theoretical and in the world little known problem can have practical consequences in people selection process - it is not ruled out that toxoplasmosis-positive individuals have different personal and performance presumptions for particular professions and tasks.

In this work we tried to find out differences between toxoplasmosis-positive and toxoplasmosis-negative individuals in personality parameters measured by Cloninger TCI (Temperament and Character Inventory) and several further personality and performance tests. Cloninger's questionnaire were selected on purpose to link temperament features with some *monoaminerg connections* (Cloninger, 1986).

We tried with the help of other tests to replicate Flegr's, Hrdá's and Havlíček's findings (1999) about differences between toxoplasmosis-positive and toxoplasmosis-negative individuals and Havlíček's findings (2001) about reaction-time slowing down as far as toxoplasmosis-positive individuals are concerned.

FILE

File contained 975 men born between 1971 and 1981 at the age of 19-29 years in compulsory military service. File of 920 volunteers was gradually examined in big four groups in the year 2000 in Prague military hospital by set of psychological examinations. Blood was taken from the volunteers to find out presence of toxoplasmosis. 677 of them were diagnosed as toxoplasmosis-positive, 243 toxoplasmosis-negative. Psychological examinations were carried out for three reasons- psychological eligibility for guarding duty, driving license and castle guard duty. Average IQ according to none-verbal WMS examination was 100,8 (SD = 15,6; N = 798) and according to verbal examination Otis 96,7 (SD = 15,9; N = 784). There was 50,2% men with basic education, 37,3% had school-leaving exam, 8,6% had university education (for 3,6% this information was missing). The volunteers signed an agreement about exploitation of their blood analysis results for scientific purposes.

At results processing we restricted the used data (with reference to homogeneity of age) to years of born from 1979 to 1981. To ensure proper filling of questionnaires we worked only with individuals who achieved, according to Otis test, IQ higher than 69, e.i weren't in the zone of light mental retardation. All subjects gave their informed consent.

METHODOLOGY

The study was carried out as double blind - at the time of psychological examination neither psychologists, nor volunteers knew results of immunological toxoplasmosis examinations. First samples of blood were obtained then psychological examinations were carried out with help of computers. Results of blood examinations were known after several weeks and did not affect conclusions about examined volunteers. The file was gradually examined by the means of these methods:

Personality examinations

TCI

We used TCI questionnaire (Temperament and Character Inventory; Cloninger, 1994) in modification of Kožený and Tišanská (1998). We let out Cloninger's validity scales, which author himself doesn't currently use. We added modified scale of lie from Eysenck EPQ/R at which we reworded items from interrogative to declarative ones.

According to Cloninger (1993) personality is complex graded system, which consists of different from psychobiological dimensions of temperament and character, dimensions of the second degree. Temperament and character are measurable and enable pass judgment on dissimilarities among people. Every individual has four *hereditary thogonal* dimensions of personality, which Cloninger denotes like temperament ones. These dimensions are observable from early childhood and include preconceptual and unknowingly teaching and are inscribed like Novelty seeking (NS), Harm avoidance (HAH), Reward easement (RD) and Persistence (PE). These dimensions have further sub-scales, so-called facets. They occur in subhuman animals likewise (Cloninger, 1994). Personality further composes of three personality traits dimensions, only partly influenced by temperament. Character is formed along ontogeny and is affected by teaching. Personality traits dimensions are called Self-directedness (SD), Cooperativeness (WHAT) and Self-transcendence (ST).

N70

Self-evaluating seventy items questionnaire used in the Czech armed forces records neurotic *symptomatic* in overall score (CS) and in scales: anxiety, depressiveness, phobia, hysteria, hypochondriasis, *obsese*, vegetative unstableness and *psychastenie*. Every symptom is evaluated on three points scale - never (0 point), sometimes (1 point) and often (2 points). The higher the score, the more distinct is intensity of subjectively sensed discomfort. Questionnaire shows actual mental state and high score can denote simulation.

Performance examinations

OTIS

Otis's test is a verbal exam consisting of 32 questions. It is used to find out verbal intelligence in the Czech armed forces (Vacíř, 1974).

WMT

Forman's matrix test Wiener Matrizen-Test (WMT; Forman, 1973) is test of none verbal part of intelligence. It psychologically resembles Raven's test. We used the test in Czech form (Psychodiagnostika, 1993).

TOPP

Test of orientation memory and attention (TOPP) tests concentration and immediate memory under time stress. Examinee is under three differently demanding time stress situations. Improving or deteriorating performance enables to reveal level of adaptation in different situations.

Rough score represents number of objects found, i.e. numeric and letter signs presented acoustically in given time periods located on a pattern with certain regularity.

All examinations were processed computer-aided. The file was further examined by experimental methodology called Numerical Square, which is not involved in this presentation.

Statistics

Version 5.1 of the Statistica software for Windows was used for all analyses. Toxoplasmosis differences were examined with multivariate analysis of variance (MANOVA) with personality and performance scores as dependent variables and toxo positive-negative as independent variables and age as cofactor.

Results

From TCI scales only one insignificant trend towards lower Novelty seeking for toxo+ individuals with $p = 0,079$.

From subjectively sensed discomfort there was tendency towards lower score of vegetative unstableness ($p=0,049$) and hysteric trend ($p=0,098$).

Absolutely obvious differences detrimental to toxo+ were evident in connection with both verbal and none verbal intelligence.

Differences detrimental to toxo+ are statistically significant in the case of TOPP test likewise, where furthermore is tendency to increasing differences between toxo+ and toxo- during tests.

Conclusions

We found out that infected persons have insignificant tendency towards Novelty seeking level, which can support Flegr's and Havlíček's hypothesis about the significance of dopamine on behavioral changes of infected persons.

We found out that there is an evident difference in performance detrimental to infected individuals. These result might have a significance for future selection processes in the army. However, it is necessary to confirm these results with bigger groups of people and women.

Tichy Vlastimil, Kral Pavel: Preparing Organizations of Acute Crise Intervention at Disaster in the Czech Republic.

*Psychiatric Department, Central Military Hospital, Prague,
Czech Republic.*

Disasters Typology

- natural
- technological
- men-caused

Integrated Rescue System For Complex Aid to Disasters Victims:

Crisis intervention is indivisible component of the rescue system which includes:

ambulance,
fire brigade,
police,
army,
logistics
and psychologist.

Integrated rescue system

The Integrated rescue team must exist even before the disaster.

Level of training of particular components.

Cooperation and subordination training.

Ability of quick activation of all forces.

It means (for psychologists and psychiatrists):

The establishment of the psychologists, psychiatrists and volunteers of other professions trained in crisis intervention, with clearly defined system, leadership and education aimed to acute crisis intervention and the after treatment (PTSD), alternatively the support system.

During disaster we deal with the treat of:

Acute stress reaction - short-term

PTSD

Decompensation of already existing psychic disorders
Secondary neurotisation from long-term effects

Disasters:

At small or at wide areas.

Within the limited disaster:

Only one psychologist who works together with an first-aid-team, fire brigade or police and who provides the crisis intervention and the debriefing

During more serious - but small area - disaster:

Deployment of the team of psychologists - one is the leader. Setting up the spot of psychological first aid, where the crisis intervention and debriefings are provided. Selecting the victims who will need the following psychological or psychiatric care takes place there too. These people are subsequently transferred to other institutions - either existing around or we can use the mobile installations (the field hospitals).

During more serious - but small area - disaster:

One psychologist works on the spot of medical first aid, where he provides the crisis intervention and debriefing to the wounded and classifies them according to the need of following psychological or psychiatric care.

During more serious - but small area - disaster:

Psychologist, psychiatrists, and trained volunteers from the rescue team provide the crisis intervention and debriefing for the rescue team.

The commander of this psychological aid is disposable for the commander-in-chief, manages the psychological-aid-team, helps the commander with predicting of victims and rescuers reactions and helps him (from the psychologist's point of view) with optimization of the impact on society

Serious and large-area disaster

At first ensurance of psychological-first-aid teams for crisis intervention and debriefings. The chief psychologist disposable for commander-in-chief. More spots of psychological care - at the disasters areas and also at the places for gathering the victims. Great importance of volunteers trained for crisis intervention and debriefings.

Must of active searching for victims, providing of the crisis intervention and debriefings, the after treatment for the people with progressing PTSD. Use of mobile teams, already existing installations. Need of seeking the people to care.

Emphasis on the work with the rescue team, debriefings, psycho-hygiene, utilizing of trained volunteers.

Do not forget self debriefings of involved psychologists, psychiatrists and volunteers.

Evaluation of experiences, edification from mistakes, reintegration of own experiences. The long work with the people involved in the disaster (victims, rescuers, witnesses) means high risk of PTSD.

It is crucial to continually observe people mentioned above in order to minimise the danger of PTSD. Don't forget that the most important is the general care - first aid, clothing, food, drink, housing, information, seeking for relatives, hope for future, integration of the disaster to the life-experience. Otherwise the psychological care makes no sense. Existence of an Integrated Rescue System based on territorial system - but without psychologists and psychiatrists

Psychologists and psychiatrists are just a part of installations at specific territory (government and non-government institutions, Ministry of Defense, Ministry of Internal Affairs) - the principle of voluntary help at disaster time.

The Czech Republic - the present state

Existence of the preparatory committee for the integration of psychologists and psychiatrists into the Integrated Rescue System and for creating the structure and management of this psychosystem and creating its education system.

This preparatory committee has good connections abroad.

The Czech Republic - future

With the help of LEONARDO project (EU - Germany and Austria) training of psychologists, psychiatrists, assistants from other professions - "peers" (firemen, caseworkers, chaplains, students, policemen, soldiers) in crisis intervention in time of disasters

training of management for organizing of the psychological aid during the disasters and establishment of permanent organizational committee

training of local trainers for education in crisis intervention

Connecting of these structures into the Integrated Rescue System of the CR

Connecting of these structures into the Integrated Rescue System of the EU - mainly its component part providing the crisis intervention - according to the keynote "crisis intervention for each European citizen in his (her) mother tongue".

Kral Pavel: System of psychological selection in the Czech armed forces.

Central Medical Psychology Department

Central Military Hospital Prague

Prague, Czech Republic

Summary

The psychological selection system provided in the Army of the Czech Republic (ACR) is described. There is assessed about 20.000 people yearly in the selection centers. These centers are located in military hospitals and so Military Health Service Department of the General Staff is main guarantee of this process in the ACR. The main areas of assessment are described. There are especially cognitive capability, personality, mental efficiency under stress conditions, normality-abnormality score, clinical interview. All selections are made by CAT system, the software is created by military specialists.

On this forum we would like to present the psychological selection system, as it is currently officially pursued in the Czech armed forces. Psychological selection for all selected positions is carried out in military hospitals and is anchored in valid regulations of Section of Military and Health Service of GS ACR. The selection is basically structuralized as a complex medical examination, whose integral and full-value part is psychological assessment either. Gravity of the psychological examination equals the gravity of the medicine ones, in other words, if an

applicant isn't eligible for position in question from psychological standpoints, is in final wording of medical finding unable as well.

The Psychological service of the ACR was established in the year 2000. This meant the integration till then independently and rather scattered operating parts of applied military psychology. Applied military psychology now works in three main sections: troops psychology section (operates directly alongside troops), school (educational) psychology section (works at military schools) and clinical psychology section, which operates in military hospitals. This presentation is particularly devoted to the clinical psychology section.

Clinical psychology section has 23 psychologists, 6 technicians in charge of the computer equipment and 17 assistant psychologists, on the whole 46 people working in military hospitals. There are four military hospitals in all.

Regarding understandable endeavor to minimize number of possible future failures - everyone who is assumed to get into mental and physical demanding situations during his / her military service is put through complex examination.

Psychological selection has a long tradition in the Czech Republic, so we would like to acquaint you shortly with its history. In 1920 the Psychotechnical Institute was founded in order to examine physical and mental efficiency and to apply the results of these researches into economic practice. In 1922 the institution began to pursue drivers' psychotechnical testing. In 1925 Military Psychotechnical service, which devotes to drivers and pilots selection, began its activity. The selection of commissioned, non-commissioned officers and troops with special tasks - e.g. signalmen joined the organization's tasks begun. After the second World War the changes in society influenced our branch as well and in the year 1951 Psychotechnical Institute was abolished. Nevertheless, after findings that psychological selections had had their foundation and their role was significant, psychofyziological department was opened in 1953 at Institute of Air and Health Service. In 1962 psychological selections came back to ground forces as well. Since this time the expertness has been developing in all kinds of transportation and in big trade and industrial companies.

Medical psychology section of Psychological Service of ACR carries out psychological assessments of military specialists' mental capability in chosen professions.

What professions they are specifically:

military drivers - emphasis is laying especially on drivers of trucks and special equipment. They can jeopardize lives of many people and are entrusted with equipment often of gigantic value.

guard duty - relates almost entirely to conscripts. According to Czech military regulations guarding duty is defined like fulfilling of combat missions at the time of peace and according to the crown-law - its violation is a serious crime. From psychological point of view guarding duty is quite interesting for few reasons. Servicemen watch strategically very important objects, they carry a weapon, they mustn't harm themselves or people - not even unknowingly. (Except for

cases of justified use.) On top they has to be capable to learn considerable number of regulations and directions.

castle guard - here apply roughly the same as for guard duty, but in addition castle guard watches the residence of the president and hence they are on eyes of public.

aspirants to professional service in the Czech armed forces and to studying at military schools

soldiers for PSOs - they ride away into regions of conflicts, but besides that they loose the control of their family during missions. In addition, they must be capable to "line up" back to normal life after comeback.

servicemen in immediate response forces

paratroopers

divers

pyrotechnists

military fire brigade - it is mainly about traffic - psychological checkup of capability to drive a car with the right of way.

Selection system, as it is practiced on psychological workplaces in military hospitals, is (minimally in terms of the Czech Republic) unique. Methods of classical psychology of work and organization with accurately enumerated standpoints for every activity do not apply here. Our approach is unspecific (not oriented on particular job or position) personality diagnostics. We are interested in complexity and integrity of mental performance of an individual from the skills and traits points of view (including the demanding situations) as well as on the axis norm - pathology. It is process with an aspirant for a position on the input and a reference about his competence or incompetence on the output.

Almost entire testing part of examination process in the clinical psychology section proceeds in CAT system. Every psychological department in military hospitals has (or is before completing) 20 interconnected PC posts, which can work independently or in the network. There are 40 such posts in the CMPD in Prague. On the whole psychological service of the Czech armed forces disposes of 110 CAT posts. Three fundamental segments of psychological appreciation are tested on computers: intelligence tests, questionnaire methods and performance tests under time stress. Through this part an aspirant is led by a nurse, but under supervision of a psychologist – in order to ensure the standard examination procedures and because of tremendous diagnostic value of observing of neurovegetative reactions (in particular at performance tests). Computerized processing enables us (to a certain extent) to work with performance psychodiagnostics methods as with projective methods. E.g. in intelligence tests except of the total score we know the number of attempts to solve every single task, time needed to solve each one and last but not least the general strategy of solving of tests too.

With that a psychologist's work ensues - complex diagnostic appreciation of an aspirant and final result. This part of checkup begins with anamneses exploration (family, personal, profession). Not only simple life story descriptions of individuals are important, but also the good interpretation of the deeds and their setting in the framework of other parts of the assessments are required. Beyond the life events, we are interested in the way of client's coping with them. Data acquired by this way are for us diagnostically and methodically more valuable

than analogical findings from personality questionnaires. We are aware of the fact that self description, particularly in situations of competition, has only very limiting value.

Further phase of the process is evaluation and interpretation of results of psychodiagnostics methods, estimation of their validity, etc. At performance tests we focus not only on quantitative values, but also on quality of the performance, its reliability, strategy of solving, ability to adapt to a new situation, to activate mental activity and at the same time reasonable regulation of emotions. It is important that all parts of examination make together understandable and logical whole - a psychologist works with a client so long until he/she is sure that his/her decision will be qualified and tenable.

We have already mentioned clinical psychology. The principal difference between its classic and our approaches is in client's motivation. Clients mostly don't come to reveal their worries and problems, but exactly contrariwise. Their aim is, preferably, to hide them not to hamper their way to become 'capable'. Nevertheless, we try to be primarily clinical psychologists. We put stress on reliability of their performance, on tolerance against stress, on hardness of their personalities, but our task is likewise to recognize personality of clients, reveal presence of psychopathological symptoms and, in case that our client fails during examination, we must disclose causes of his failure, acquaint him with results, explain him our conclusion and propose to him some way solving.

In that way, we examine yearly almost 10.000 people, from of that approximately 2.900 are drivers, 1.640 soldiers for guard duty, 810 aspirants for study on military schools, 660 persons wanting to serve in the army as professionals, 2.600 men for National Security Office, 1080 men for UN missions. If we add all these numbers from all military hospitals in the Czech Republic, we get 25.000 men examined every year (calculated to the number of psychologists it represents 4-5 clients daily). In addition, with regard of its clinical-psychological specialization medical-psychological departments pursue individual psychodiagnostic and therapeutical activities, generally in cooperation with psychiatric and neurological departments.

In our work we strive for verification of our methods and conclusions in order to get further improvement. Cooperation with military police is one of several examples. We confront our database of assessed drivers with their records about traffic accidents and analyze them. According to last records, from 1705 "capable" drivers 97 of them had an accident, which is 5,7%. From these data we consider fruitfulness of our method as very high.

Barbara Jacobi : Being a Soldier in the Danish International Brigade.

Psychologist, Inst. of Military Psychology/ Royal Danish Defence College, Danish Armed forces, Denmark

In 1994, the Danish Armed Forces established a new entity, the Danish International Brigade (DIB). Besides forming part of the defence of Denmark, the brigade was planned to be at the disposal of NATO as the Danish contribution to The Rapid Reaction Forces, as well as to participate in peacekeeping operations for UN and OSCE.

It was the plan that approx. 80% of the brigade should consist of reserve personnel, hired on a stand-by contract, the DIB contract. This contract should imply a number of ties for the contract-labile person in the three-year contract period with reference to education and deployment. In return, the contract would offer an economic consideration to a certain amount.

The prerequisite for DIB to live up to these intentions was that it would be possible to attract the necessary number of qualified young people, as well as to ensure that these people kept their motivation throughout the whole contract period, a period in which they were also supposed to create for themselves a civilian existence.

The Institute of Military Psychology under the Royal Danish Defence College (IMP/FAK) has followed a group of soldiers of the Brigade through a longitudinal study, the purpose of which has been to evaluate the soldiers' experience of being on a stand-by contract throughout the whole contract period, in order to identify conditions that need improvement.

In August 1996 and February 1997, 397 soldiers were deployed with respectively IFOR and SFOR on peacekeeping missions, after having signed a DIB contract immediately after having done their military service. These soldiers constitute the population of the study.

The Institute of Military Psychology wished to follow these soldiers through the study, and after the three-year period to take stock of their time as DIB soldiers, in order to find out how the soldiers perceive the contract period three years after signing up. What did they find satisfactory, and what did they find unsatisfactory? Will they re-sign the contract? Will they advise others to sign a DIB contract?

Status of the DIB progress three years after the signing of the contract

The overall picture of the results of the studies in the period 1997-2000 indicates that the soldiers were generally satisfied with having had a stand-by contract. They felt that they had matured through their mission deployment, and that it had been an experience they would not have missed. Nevertheless, the soldiers point to a number of issues that they experienced as less than satisfying, and which need improvement.

Signing up

The extent and quality of the information received prior to signing the DIB contract and deployment are essential to the soldiers. The more realistic the basis for making the decision, the closer the expectations will come to actual circumstances, and thus frustrations and disappointment will be diminished.

Three years after signing up, almost half of the soldiers in the study described the information received prior to signing up as insufficient. Generally, the experience prevailed that the regiments had been more occupied with recruiting to the DIB than with supplying the draftees with realistic and neutral information on the basis of which they could make a deliberate decision. Part of the problem was that in some regiments, the people who presented the information were not well enough informed, and thus incapable of answering questions concerning, for instance, contractual obligations. In addition, the draftees in some regiments felt that they had very little time for reading the contract and consider its implications, before they were asked to sign. Some soldiers recount that they were decidedly misinformed as regards the number of deployments they might be commanded on.

Preparation and deployment

The soldier's evaluation of his DIB period is influenced by his experience of meaningfulness as regards the mission in general, his presence in the mission area, his particular job function, and whether he feels prepared to take on the assignments he is expected to.

According to the study results, a third of the soldiers did not feel immediately after their return from the mission that they had been sufficiently prepared to comply with their task in the mission area.

It appears from the qualitative responses that some of the soldiers were not satisfied with being given another function during their deployment than the one they had been trained for.

Amongst the work awaiting the soldiers in the mission are many CIMIC-related tasks that make great demands on their social and cross-cultural competence, cf. descriptions of the function of NATO soldiers in peacekeeping missions.

A separate study of the attitudes of soldiers in IFOR team 2 made by IMP in 1997 tries to uncover what sort of improvements are wanted in the pre-mission training. The study shows that almost half of the soldiers were not satisfied with the contents of the training, nor with the amount of time used on it. This figure is valid on both private 1st class and non-commissioned officer level, though a bit higher on NCO level. The same study shows that soldiers looked for more teaching/training in three areas in particular:

Language training (wanted by 72% of the soldiers), communication with the conflicting parties and the local population (wanted by 50% of the soldiers), and information about the political situation in the area and the causes of the conflict (wanted by 46% of the soldiers).

Comradeship

When the soldier thinks back on his period of deployment, one of the things which rates highest in his memory is the comradeship with others and the feeling of community within the group.

According to the soldiers' responses immediately after homecoming, the mission was marked by strong comradeship among the personnel and a high rating of social elements. 88% indicated that their unit was marked by a high degree of solidarity, and 92% indicated that they had experienced good comradeship in their group. However, the responses also point out, that the prevailing culture in the mission areas does not always allow for sharing difficult experiences and frustrations with others. While 90% had a feeling of support within the group, almost 25% of the soldiers indicated that they did not, or only to a limited degree, share their frustrations and difficult experiences during the mission. This may have many causes and be dependent on factors like, for instance, the age and maturity of the soldiers, and the attitude and ability of their leaders to further a culture which allows room for the sharing of emotions.

About two thirds of the soldiers in the study immediately after homecoming expressed a wish for more possibilities of sharing the experiences of the deployment in the homecoming program. The soldiers thus express a need to talk about their experiences. This supports the importance of furthering a more open culture, also in the mission areas.

The positive meaning of comradeship for the soldier's experience of the deployment is an important consideration as regards the handling of contact with the personnel during the stand-by period, which should support activities geared towards continuing and strengthening the sense of community.

Leadership

The soldiers' perception of their leaders is another decisive factor when it comes to the day-to-day experience during the deployment.

Nearly a third of the soldiers in the study indicated 6 months after their homecoming, that during the deployment they experienced good leadership only sporadically or not at all.

A third of the soldiers felt that they had not received enough information, and a similar number experienced a lack of commendation and encouragement from their leaders and a low degree of trust between leaders and men.

The stand-by period

The activities, which the regiment initiates for the soldiers with a stand-by contract during their contract period, are basic for the soldiers' experience of belonging to a DIB-unit. The activities include maintenance training, the purpose of which is to revive the soldier's competence after being absent from the military environment, as well as other, more socially determined events. It is during these activities that the individual soldier is confirmed in his belonging to a community of soldiers. The activities contribute to strengthening his identification with the unit, and his responsibility towards the group. Positive experiences during the stand-by period will be an important factor in the soldier's possible considerations about early annulment of the contract, and his readiness to be deployed.

Generally, the study shows a considerable demand for more activities during the stand-by period in the form of more calls for training and other common activities, as over a third of the soldiers, three years after signing their contract, expressed dissatisfaction with the level of activity during the stand-by period, which they found too low. A third of the soldiers also felt that the amount of information they received from their regiment during the contract period was unsatisfactory. In the qualitative answers, many expressed the feeling that they had been forgotten.

The qualitative as well as the quantitative answers in the study three years after signing the contract indicate that there are great differences between the various regiments when it comes to contact with the DIB personnel during the stand-by period.

Almost two thirds of the soldiers in the study expressed dissatisfaction with the contents of the maintenance training.

The qualitative answers indicate, that the dissatisfaction with the maintenance training is linked to an experience of too long periods of waiting, too little meaningful activity and too few events with other soldiers.

The picture, which begins to emerge, is that of the soldier experiencing a stand-by period where not much happens, in contrast to the earlier deployment period, where he had the feeling of being an indispensable part of a whole. He feels that he has made a great personal effort in being sent out in the mission, as the deployment has been characterised by changes from great workloads to boring inactivity, odd times of work, personal deprivation in the form of absence from home and lack of a private life. He therefore expects that the Armed Forces (AF) in general, and his regiment in particular as a form of recognition values his efforts and shows interest in his person and wishes to keep up contact with him. When this does not happen, he feels neglected.

Conditions of pay

Many of the soldiers indicated three years after signing the contract that an important consideration in their decision not to re-sign the contract was that the pay was too low. Half of the soldiers considered that the economic aspect had significant impact on their choice. 82 % indicated that the size of the pay packet is an important reason for not recommending the DIB to others. In the qualitative responses, the impression is that the pay is too low to compensate for the pressures they feel they are under during the deployment, and compared to the pay they learn that NATO soldiers from other countries get.

However, only a few of the soldiers had a purely economic view, when they signed their DIB contract originally. When they afterwards include the economic aspect in their evaluation of the course of events, it is followed up by many of the soldiers with an indication that they miss an appreciation from the AF of their efforts during the deployment. Higher pay would be regarded as such an appreciation. Thus it is indicated that the effort they feel they have contributed is disproportionate to the appreciation or reward they seem to get.

General impressions of the DIB period

The soldiers' general impression of the DIB period influences their role as "ambassadors" for the DIB and the AF in general.

83% of the soldiers in the study indicated three years after contract signing that they had been satisfied with the course of their DIB period. There was a widely held impression that the mission on which they were engaged was meaningful. There was a predominantly positive response to being employed in the AF, in that 86% of the soldiers indicated that their attitude to the AF was positive.

Signing the DIB contract again or not?

Satisfaction with the course of the contract with the DIB does not necessarily mean that the individual soldier wishes to re-sign the contract. Less than half of the soldiers who finished the course of their contract considered re-signing. An important contribution to not wanting to re-sign the contract is the costs in terms of the soldier's civilian life.

It was a widely held impression that being deployed is an experience which often has a positive influence on one's career, or in the worst case has no influence. But it was also a widely held impression that a contract course with the DIB should be a once-only phenomenon, so as not to damage the future civilian life in terms of family and career. Some soldiers find repeated deployments to be attractive, but for everyone there is a limit to the number of deployments you can manage, beyond which the pressures mount too high. Where this limit is drawn depends on individual personality traits and general life situation.

A lifestyle analysis of the soldiers in the study

The study gives the impression that the soldier population is not homogenous, when it comes to their way of relating to the course of their period in the DIB. During the three-year period of study, most of them have been deployed once. Many of these soldiers have not wanted to sign a new contract. There is, however, a fairly large group who has been deployed twice, and, finally, there is a small group who has been deployed 3-4 times during the three-year period. Another example of disparity in the group shows up with the question of how a future contract should be structured; whether the stand-by period should be of 2, 3 or 4 years duration with a varying

financial bonus. On this question the group is divided into three almost equal parts as regards their wishes. The group of soldiers in the study thus represents several subgroups which each seems to have different motives for joining the DIB, different life situations and consequently different considerations about their actual or future DIB contracts.

In this population, a picture emerges of at least three types of soldiers characterising three subgroups in the overall population. The first type is the soldier who is in the course of a higher education, and who chooses to sign a DIB contract, among other things, in order to supplement his educational support. This type of soldier has needs which are tied to his educational situation. Another type of soldier is he who has established himself with a family. This type looks on his DIB contract as a possibility of travelling and getting new experiences, while at the same time, he has special needs which ties him to his familial responsibilities at home. The third type of soldier is he who is primarily driven by his interest in the military environment, and whose first priorities are to this rather than to civilian life, and whose first demand is therefore that the military system works efficiently.

Not all soldiers in the DIB can be relegated to these typologies, but the subdivision gives an impression of some of the more important attitudes to joining the DIB. The division is a model whose purpose is to point at the different needs of the DIB soldiers, so that attention to these needs may figure in future considerations, particularly about securing the personnel of the Brigade.

Considerations about the recruiting and securing of personnel

On the basis of the tendencies, which we can surmise from the DIB soldiers' responses in this study, certain focus areas can be pointed to as regards the recruiting and securing of personnel in the DIB.

The study shows that the regiments between them have a very disparate practice in their way of managing the recruitment for the DIB and the maintenance of contact with the stand-by contracted personnel. From this point of view, it would be sensible to establish a co-ordination of the activities. As a matter of fact, this has already been started from 1 January 2001 as regards the information given to the conscripts about the DIB and the DIB contractual conditions.

The stand-by contracted personnel in the DIB have a series of particular needs, which are different from those of the service personnel. This group of soldiers do not have a daily contact with the AF, and this raises the question of how the AF can ensure that these soldiers retain that feeling of connection to the AF which is an important element in their motivation for belonging to the Brigade. There are several factors which motivates the stand-by contracted soldiers. For many of them, the trip and the adventure are a strong motivation factor, for others, it is the possibility of extra pay. Quite a few soldiers sign the stand-by contract in the hope of being deployed only once, while others are motivated for several deployments.

The stand-by contract implies that the AF shall have the possibility of deploying personnel any number of times required by the political situation. It is therefore necessary that the stand-by contracted personnel feel ready for being deployed during the whole of the contract period, and that they can identify with being soldiers and being a part of the AF as an organisation, also after their military service is over and after the first deployment.

It must be a clear goal to ensure this readiness in that part of the personnel who do not have regular employment with the AF and therefore do not on the face of it feel part of the organisation.

The deploying authorities have an important task here.

The regiment's management of the contact to the soldiers during the stand-by period is decisive in this connection. As a point of departure, it is important to ensure that the stand-by contracted personnel do not feel forgotten by their regiment. It is also important that the soldiers get the opportunity to meet each other during meaningful activities, thus strengthening solidarity within the group.

The management of contact with the personnel also includes contact with the soldiers' relatives who need information to give them a greater feeling of security, which will enable them to support the soldiers on deployment.

There is also a need during the stand-by period for soldiers to be enrolled in activities which they feel are educational, especially as regards the competencies they will need during their deployment on a mission.

Among young people today, there is a greater awareness of the cost-benefit conditions of a possible employment than there used to be. The young have expectations of a clear and immediate benefit from the conditions of employment. Thus an employer cannot to the same degree as earlier take loyalty towards the place of employment for granted, unless he can offer a form of personnel care in return.

It seems important to the soldiers that the pay is of a certain amount, also compared to that of NATO soldiers in other countries. At the same time, there are many indications that the recognition represented by the amount of pay is what is lacking. It is therefore possible to imagine that recognition taking other forms than money would satisfy the soldiers' need for appreciation. Many soldiers state that it is important for them to profit from the DIB training, and that this enters into their considerations about whether to re-sign the contract. The possibility of personal development is a condition which weighs heavily.

If the AF still wishes to make their claim in the competition for recruiting and securing personnel, it must appear that young people can claim immediate and clear profits from their connection with the AF. Motivation and loyalty towards the organisation can hardly be created without regard to this.

Petr Jandejsek, Hana Červinkova, Michal Kopecký, Jaroslav Sykora: PSYOP as a challenge for Military Operations in the 21st Century.

The Stress Research Center of Military University Vyškov, Czech Republic

The character of current conflicts and the spread of means of communication, e.g. electronic media, together with the findings of communication science have caused deep changes in understanding of the role psychological operations (PSYOP) can play in this information age. The former understanding of PSYOP, which I will introduce in the next part, tends to be replaced by the new one in two aspects. The first change is an option for new effective techniques and,

consequently, the second essential change is a raise of PSYOP to be a full scope method of conflicts resolving.

I set the changes in understanding of PSYOP into the process of globalization and democratization, which involves not only economy, culture and politics but communication and information flows as well (Ch. Dandeker 1994, D. Segal, M. Segal, D. Eyre 1992).

Using practical and theoretical resources I will argue for this new PSYOP paradigm based on communication. In final part I will describe the development and orientation of the Czech PSYOP structure.

Introduction

Let me take an illustration to begin. During the World War II the German command are planning the invasion of Britain. They are getting ready for the forthcoming crossing of the Channel by boats. At that very time the BBC broadcast a brief "language lesson". *"Attention, Jerries! (British slang for the German soldier). Since you are preparing to invade our country, it is important that you learn some English phrases. Please repeat after me: The Channel crossing, the Channel crossing. Very good, now some words you will find helpful while you are on the boat. The boat is sinking, the boat is sinking. Again very good! Now, let's practice the conjugation of verbs. Now repeat after me: I am burning, You are burning, We are burning."* Documents found much later confirmed that, after that radio broadcast, the Germans had the impression that the British had a very effective plan how to resist the German invasion from the water. They believed that they were prepared to cause them maximum losses, which would have been a disaster for the German forces.¹²

This is an example of a classic psychological operation. Activities like this, whatever named, have been present in military operations almost every time. Excellent commanders have always recognized that a battle is not just a struggle of arms but of and for minds and hearts as well. Basically, PSYOP is a tool in the hands of a commander for the objectives of an operation to be successfully achieved. It is the commander's primary tool to communicate with the foreign target audiences.¹³ This support element, which serves as a force and diplomatic multiplier as well as a combat reducer, should be used in synchronization with other military elements. The more the weapon systems and technical equipment are sophisticated, the more psychological, medial, and communicative capabilities should be enhanced. We will see later that PSYOP today is very close to public affairs, public information, and even soldier education, and thus the field of PSYOP has much enlarged.

According to the NATO policy we understand PSYOP as planned psychological activities directed to the target audience (individual or group) in order to influence attitudes and behavior.¹⁴ They mostly bear the form of informing and persuading. Although PSYOP occurs across the operational continuum in various forms, in this paper I take account especially of the most challenging forms today, the Peace Support Psychological Activities (PSPA) and Psychological Consolidation Activities (PCA).

¹² Lísková, Radka: Psychological Operation. In: Czech Armed Forces Today, AVIS 1/2001, pp. 23-25.

¹³ 4th Psychological Operations Group: Organization and Capabilities. Briefing of MAJ J.P. Morgan at the National PSYOP Course 2000 in Vyskov, Czech Republic

¹⁴ Definitions and division are drawn from MC 402 and AJP-3.7.

Character of PSYOP in transformation

What are the benchmarks and resources for the next development of PSYOP? In the quest for answers I will draw mainly from practical findings in SFOR and KFOR PSYOP, and from the experiences of Czech peacekeeping missions. Then I will discuss the theoretical background of PSYOP and its implications for practice.

Lessons learned in Bosnia and Kosovo

The PSYOP element has been present at both main theatres in Balkan, Bosnia and Kosovo. Lessons learned in Bosnia, based e.g. on Lt. Col. Steven Collin's observations¹⁵, made it clear that too much energy and resources were put in support of less-powerful traditional tactical elements and tools, such as leaflets, handbills, and loudspeakers, although much more influential electronic media, e.g. radio and TV, were neglected. That happened in spite of the huge role electronic media had played before and in Bosnia war. Capturing various TV and radio transmitters, Bosnian Serbs focused inwards and produced the atmosphere of jeopardy and hatred, while Bosnian Muslims successfully influenced the international audience and gained its sympathy.

SFOR case proved that the increasingly urban and interconnected world demanded new and more appropriate approach of PSYOP forces. More time, training, resources, and money should be spent on electronic media in order to make PSYOP more powerful and influential.

Commanders at all levels should be educated regarding the media environment in prospective areas of operation and, on the contrary to the traditional manner, PSYOP should not use its own media and transmitters so far, but should make use of the inland media, support them, and make products for them. It is both more effective and cheaper.

PSYOP in KFOR made use of experiences dropped in SFOR. Unlike SFOR, the basic products here are the self-produced newspaper Dialogue, newspapers inserts, leaflets, and especially radio and TV broadcast using inland stations. The current PSYOP activities in KFOR involve anti-violence campaigns (especially in Presevo and Mitrovica), distribution of weapon authorization cards, mine awareness and traffic safety programs.¹⁶

PSYOP in KFOR is provided on the level of MNBs, receiving special support from the Joint Forces Command at the theater-level. It turned out that when operating in low-intensity conflicts, such as in Bosnia and Kosovo, tactical commanders need a relatively high degree of local autonomy to conduct their own PSYOP plan, in order to be responsive and flexible. The standing hierarchical process of approval for all PSYOP products is complicated and slow-paced.

Also the preparation of PSYOP specialists is not accurate many times and Collins points that these "soldiers often become generalists lacking an intimate knowledge of the culture and history of the region where they are deployed – and even lacking adequate linguistic skills." (1999)¹⁷

The secondary analysis of the regular research reports on the Czech SFOR and KFOR peacekeeping units provide us with other important information.¹⁸ As for the influence on the local inhabitants the most effective and decisive seems to be the physical presence and face to

¹⁵ Collins, Steven, 1999, *Army PSYOP in Bosnia: Capabilities and constraints*

¹⁶ Tytgat, S., 2001, *PSYOPS Support Element Operation Joint Guardian*. Briefing at the NATO PSYOP Working Group, Prague

¹⁷ Collins, Steven., 1999, p. 3

¹⁸ The Center of Advanced Social Studies of the Chief of General Staff makes a three-phase social-cultural research in each of the Czech SFOR and KFOR rotations.

face communication. Moreover, the advantage of Czech soldiers in Bosnia is the possibility to speak and understand the local language up to a certain degree, since we all speak Slavic. This is unfortunately not the case in Kosovo.

To be better prepared for this form of communication, the training of our candidates for Balkan missions starts to include the social-cultural preparation. That consists of history, cultural habits, social environment, and religion. We also suggest providing soldiers with the training in communication, that would cover important phrases in local language, techniques of communication, persuasive communication, and usage of key symbols.

PSYOP as communication

The starting point of our theoretical research into psychological operations is: PSYOP may be viewed as a kind of communication. In other words, psychological operations to be effective, they must become more and more communication.¹⁹ This seemingly a non-conflict point is not generally acceptable at all when we realize what is the form of many psychological operations today. We encounter a unilateral conduct without any bond with the addressee, which can be hardly called communication. Let us briefly look through some contemporary communication theory with the practical background of such fields as psychotherapy, mediation, and personal management.

Communication is not a mere transmission of information, but it is a relation between a sender and a receiver. That relation requires a kind of joining. Also the roles of senders and receivers are always in turn and we cannot think of a linear or one-way instructive interaction, at least about an effective one. We should rather imagine a circular or a dialogue model, where all sides are active and the feedback is essential for the re-formulation of my original mission and view. Everyone perceives a problem, which is in fact the different view at the reality, from his/her own perspective. The task of communication then is to try agreeing on the common goal and harmonizing the diverse perspectives. The condition is to know how the other side understands the reality. It has great implications for the planning process.

Results and recommendations

In the previous parts I argued for the new approach towards psychological operations which I call a paradigm based on communication. On strategic level I recommend the broad usage of the inland electronic media with the aim of overcoming the national isolation. As Steil and Woodward in their study "A European 'New Deal' for the Balkans" claim, "no positive political change can occur until the damaging psychological effects of isolation are reversed". (1999) On tactical level then the interpersonal creative communication should be enhanced to create a relation or a bond with the audiences, and to harmonize the perspectives on a day to day basis. The presumptions of this PSYOP will be the medial and communication training.

Czech PSYOP and the Stress Research Center

The Czech Armed Forces are actually building its PSYOP structure, and the role of the Stress Research Center of the Military University Vyskov, which is the research and expert element in PSYOP, is to imprint the new „communication approach“ into this process of development.

¹⁹ The question of effectiveness brings us to the broad problem of testing and evaluating in PSYOP. We will see later that a paradigm of communication sets new measures of effectiveness, e.g. a degree of agreement on the view at the reality.

Stress Research Center grounds its PSYOP capabilities on participation in the editorial board for the NATO PSYOP Doctrine AJP-3.7, and especially on the preparation and running of the first national PSYOP course. This course was successfully run in Autumn 2000 at Military University Vyskov, Czech Republic, in cooperation with the lecturers of 6th PSYOP Battalion, US. We provided the first 15 Czech officers with the basic information on planning, targeting, PSYOP products development, and testing. Besides these fundamentals we focused on our special approaches to this field, and so we talked about marketing, communication, ethics, and social-mapping.

In the long-run Stress Center provides research into PSYOP as a form of conflict resolving, into ethics in PSYOP, and professional qualities of PSYOP specialists. Our last actual task is to prepare the methodology and criteria for the selection of PSYOP specialists.

Conclusion

The shift towards the 'PSYOP communication paradigm' requires a mental change from the static bipolar view at the reality typical for Cold War to the understanding of reality as a chessboard where each player has some restrictions but usually much more options to move. Psychological operations may play an important role in this game by their promoting intra- and international discourse, instead of combat solutions. The powerful tools in doing this will be the electronic media and the personal presence with the face to face communication. There is no need to pretend PSYOP is an almighty solution. In fact, there is none. However, the chance is the commanders will better make use of this tool which adds to the success of military operations.

Literature

- Anzenbacher, A., 1994, *Úvod do etiky*. Zvon, Praha
- Berger, P. L., 1991, *Pozvání do sociologie*. Správa sociálního řízení FMO, Praha
- Caforio, G. (ed.), 1998, *The Sociology of the Military*. An Elgar Reference Collection, Cheltenham, Northampton
- Collins, S., 1999, *Army PSYOP in Bosnia: Capabilities and constraints*, U.S. Army War College
- Goldstein, F. L. – Findley, N. F., *Psychological Operations: Principles and case studies*. Air University press, Maxwell Air Force Base, Alabama
- Heczko, S., 1997, *Obraz světa v pojetí postmoderny – úvod do problematiky*. In: Marathon 6/1997
- Jandejsek, P. – Dvořák, J. – Sýkora, J., 2000, *Wars Without Blood: Military Trends In The Coming Millenium*. Briefing at Interim Conference of RC 01, Strausberg
- Kümmel, G. – Prüfert, A.D. (eds.), 2000, *Military Sociology: The Richness of a Discipline*. Nomos Verlagsgesellschaft, Baden-Baden
- Lisková, R., *Psychological Operation*. In: Czech Armed Forces Today, AVIS 1/2001
- Morgan, J. P., 2000, *4th Psychological Operations Group: Organization and Capabilities*. Briefing at the National PSYOP Course 2000 in Vyskov, Czech Republic
- NATO PSYOP Policy: MC 402, AJP-3.7
- Ricoeur, P., 1993, *Život, pravda, symbol*. Oikoymenh, Praha
- Schehr, R.C., 2000, *Reconceptualizing Dispute Resolution: Lessons From North American Indians*. Briefing at Interim Conference of RC 01, Strausberg
- Steil, B. – Woodward, S.L., 1999, *A European "New Deal" for the Balkans*. Council on Foreign Relations, Inc.

Tytgat, S., 2001, *PSYOPS Support Element Operation Joint Guardian*. Briefing at the NATO PSYOP Working Group, Prague
Úlehla, I., 1999, *Umění pomáhat*. SLON, Praha.

Preiss Marek¹, Klose Jiri²: Personality disorders diagnostics through the C.R. Cloninger's theory.

1) *Prague Psychiatric Centre*

Prague, Czech Republic

2) *Central Military Hospital Prague*

Prague, Czech Republic

Summary

Authors present clinically useful approach of personality disorder diagnostics on the base of low self-directedness (SD) in Cloninger's Temperament and Character Inventory (TCI) and configuration of temperament traits of novelty seeking, harm avoidance and reward dependence. Temperament trait were assessed in male general population (N=543, age 19-28) and older population (N=91, age 48-76; N=125, age 22-68). We suggest to interpret SD under 1-2 standard deviations as a personality disorder trend and SD under 2 standard deviations as a personality disorder. We discuss relevance for military psychological selection.

Persons with specific personality disorders are subjects of common problems of general medical practice as well as of psychiatric practice. The classification of personality disorders belongs to the most difficult and controversial chapters of the psychiatric classification. Their general prevalence is stated between 6 and 9 % (according to Smolik, 1996) but sometimes the higher prevalence is also stated – between 10 and 15 % (according to Clarking, 1998). The same problem appears when some persons are selected (for example in the army).

Five versions of the American DSM (the Diagnostic and Statistical Manual of mental disorders) also includes personality disorders because of the practical reasons. There are lots of patients that suffer from personality disorders and that appear in medical offices. They represent a very problematical part of patients. The diagnosis of personality disorders is closely connected with slower treatment and higher noncompliance and also with more difficult establishment of the contact between a patient and a doctor or a therapist (according to Coolidge and Segal, 1998 and Mombour and Bronisch, 1998).

The clinical use of Cloninger's theory of temperament and character (TCI) for the diagnostics of personality disorders is made possible thanks to several hopeful exploratory findings that make this theory (TCI) suitable for the practical diagnostics. Any attempt of a clinical algorithm of using TCI for the diagnostics of personality disorders has not been recorded yet.

Normal personality characteristics can be very well described by means of four temperamental inborn dimensions that are regularly spread and they are genetically independent of each other. These dimensions reflect four cerebral systems. Every personality is a complex and gradual system according to Cloninger. This system consists of different psychobiological dimensions, temperament and character. Temperament and character can be measured and they enable to recognize differences among people.

Temperament consists of four hereditary orthogonal personality dimensions that can be observed since the early childhood and that include preconceptual and unpurposed teaching. Subhuman animals have these dimensions too. They have a special denotation – novelty seeking (NS), harm avoidance (HA), reward dependence (RD) and persistence (PE).

Every personality farther consists of three character dimensions that are only partly influenced by temperament. Character is formed in the process of ontogenesis and it is influenced by teaching. The character dimensions are denoted as self-directedness (SD), cooperativeness (CO) and self-transcendence (ST).

The TCI questionnaire that has 240 items and that is called the Temperament and Character Inventory (in the Czech Republic Kozeny et al., 1989) has contributed to propagation of Cloninger's ideas. This questionnaire had its former version in the Czech republic that was called TPQ and it was translated and validated by Kozeny and Tisanska in 1998. Clinical possibilities and some experience with healthy population have been described somewhere else (Preiss, 2000 a, Preiss et al., 2000 b).

The affinity to personality disorders has been confirmed several times in TCI (according to Cloninger et al. 1994 a, b; Svrakic et al., 1993; de la Rie et al., 1998; Bejerot et al., 1998; Mulder et al., 1997). The first relevant finding is based on low distribution of SD and CO in cases of all personality disorders. The other one is based on the relationship between subtypes of personality disorders and the specific profile of TCI that classified according to the temperament dimensions. The first finding is supported by many resources (Svrakic et al., 1993; de la Rie et al., 1998; Bejerot et al., 1998) while the other finding is confirmed only partly. The relationship between temperament and individual clusters of DSM personality disorders is often investigated (Mulder et al., 1997; Svrakic et al., 1993). This is for example the high harm avoidance or the high reward dependence in the cluster A (this is the paranoid, schizoid and schizotypal personality disorder), the high novelty seeking in the cluster B (this is the antisocial, extreme, histrionic and narcissistic personality disorder) and also the high harm avoidance and the low novelty seeking in the cluster C (this is the evasive, dependent and obsessively compulsive personality disorder).

Cloninger (1994 a, b) recommends to evaluate the personality disorder on the basis of substandard scores of SD and CO (less than 33%). Cloninger comes to this conclusion on the basis of work of Svrakic et al. (1993). Low scores of SD (less than 0,001 of percentile) and also of CO (less than 0,05 of percentile) predicate all types of personality disorders. The low score of SD indicates a persons' difficulty with a realization of his her responsibility. It also indicates a persons' difficulty with his or her adequate. The score of SD can be normal in some cases but the score of CO is substandard (this person is self-directed well but noncooperative, selfish, unemphatic and socially intollerant). If the score of SD reaches from 0 to 16,7 of percentile, the probability of personality disorder is 90%. If the score of SD reaches from 16,7 to 33 of percentile, the probability of personality disorder is between 40 and 50%. The risk of personality disorder is reduced when the scores of novelty seeking (NS) and harm avoidance (HA) are low and this risk is increased when the scores are high. The first author (M.P.) had the experience with the application of TCI in the extended psychological exploration when he examined more than 50 patients from the Prague Psychiatric Centre (PCP). A new computer program for the administration and evaluation of TCI has been developed on the basis of this experience. The dimension of persistence did not prove good when the clinical application of TCI was done. The reason for the failure is that the dimension of persistence has only 8 items and the clinical dispersion of results is not sufficient. The results of the Czech population in scores of the self-

transcendence are much lower than the results in the American population. They are similar to the Swedish standards (according to Brandstrom et al., 1998) as well as to the Dutch standards (according to de la Rie et al., 1998). We must be very careful if we try to interpret scores of self-transcendence (ST) because there are no Czech standards in this field to day.

The aim of this work is to give a clinical instruction how to evaluate TCI results with regard to personality disorders and how to find links for different ages on the basis of the exploration of the Czech general population.

The group

The group consisted of 975 men in the age between 19 and 28 years in the course of basic military service. Cloninger's questionnaire (TCI) has been administered as a part of a routine psychological exploration in this group of conscripts to find out their competence for the military service and their readiness to manipulate arms. The investigation was done in the beginning of the basic military service or in its course. The group was further reduced to the persons that had reached at least IQ 90 in Otis intelligence test. The sample was then reduced to N=543. We eliminated the persons that had scored less than IQ 90 from the group in order to increase the probability of the adequate understanding of the individual items in the questionnaire.

We used three different groups of people of different age for the percentile standards.

The first group that consists of 543 people / N = 543 / has been already described in the previous sentences. The second group is a non - psychiatric group. It consists of 34 women and 91 men / N = 125 /. The people in this group are in the age between 22 and 68 yrs. / M = 45, SD = 11 /. They underwent the psychological check - up in the Psychological Department of the Central Military Hospital in Prague. This check-up was carried out within the frame work of the safety tests. Cloninger's questionnaire /TCI/ has been administered as one of possible methods.

The third group is the oldest. It consists of the patients that suffer from the disorders of the mobile corporal system /the Parkinson disease and the essential tremor/. There are 60 men and 31 women in this group / N = 91 / and their age is between 48 and 76 years / M = 58, SD = 6/. This group was examined in the Neurological Clinic of the Central Military Hospital in Prague. This examination was carried out in the framework of the diploma work about temperament of the patients that suffer from the Parkinson disease. Cloninger's questionnaire /TCI/ was administered in combination with an interview.

The method

We used the questionnaire called the Temperament and Character Inventory /TCI/ Cloninger et. al., 1996 b/ that had been translated by Kozeny with the modification of two items in the translation. We have omitted Cloninger's validity scales that are not used by Cloninger today. We have joined the modified scale of lies from the Eysenck's theory EPQIR where we had reformed the interrogative items to the informative items. The form of the TCI questionnaire stays the same. It consists of 238 items and each proband decides whether the particular item is valid for him or not. The method was administered on computer that had a written instruction.

Each proband had to evaluate different ways of behaviour and perception and state if the particular way of behaviour and perception is regular, normal or extreme.

We have evaluated each personality disorder on the basis of the dimension of self - directedness /SD/. If the score had been in a range between the first and the second standard

deviations of the group, we interpreted the score like a **trend to personality disorder**. If the score had been 2 and more standard deviations of the group, we evaluated this fact as a **personality disorder**. We evaluate the different types of temperament on the basis of deviations that are above and under the average of dimensions in a group that is adequate in investigation because the relationships to personality disorders is usually lower than in case of the dimension of self-directedness /SD/. /Casey and Joyce, 1999/.

Cloninger defines and describes these dimensions like this:

Novelty seeking - NS, the behavioral system of activation

The hereditary basis of activation or initiation of behaviour /for example an explorational activity and a reaction to a new stimulus/. This is an inborn tendency to an intensive excitement as a response to new instigations. A high score means excitability, explorativity, curiosity, impulsivity, intolerance to monotony while a low score means indifference, reserve, systematization, thoughtfulness and a slow pace.

The studies prove that novelty seeking is independent of mood and anxiety and that it positively correlates with aggressivity, impulsivity, criminality, the second type of alcoholism and extroversion. Alcoholics often have high novelty seeking /NS/ and low harm avoidance /HA/. High novelty seeking /NS/ in the childhood combined with low harm avoidance /HA/ and reward dependence /RD/ predicts antisocial behaviour of adolescents, alcoholic and drug addiction as well as criminality in the adult age.

Harm avoidance – HA, the behavioral system of inhibition

The hereditary basis of suppression or changes in behaviour that appear like pessimistic worries in anticipation of future problems, passive and evasive behaviour and easy tendency to become tired. This is an inborn tendency to react intensively to unpleasant instigations. A high score in the dimension means caution, doubt, passivity, tension, uncertainty or pessimism. A low score means relief, courage, optimism and dynamism.

The studies have proved that harm avoidance /HA/ is influenced by depression and anxiety more than in case of novelty seeking /NS/. It correlates with shyness, Eysenck's neuroticism, introversion and venturesomeness. All types of agonizing disorders have high harm avoidance /HA/, /usually in the highest sixth of general population/. Depressive patients have higher harm avoidance /HA/ than general population before and after treatment.

Reward dependence - RD, the behavioral system of dependency.

The hereditary basis for socially sensitive behaviour, dependency on support of other people and social links. This is an inborn tendency to react intensively to rewarding instigations, to behave in a certain way when different situations appear that are connected with reward or that contrast with punishment. A high score in the dimension means sensitivity, affection, dependence and sociability. A low score means insensitivity, pragmatism, hardness and cold-bloodedness.

The studies have proved that reward dependence /RD/ is dependent on measure of social reserve and it correlates with extroversion and empathy. It is usually higher by women than by men.

Self – directedness – SD

Self-directedness is measure of maturity, responsibility, large intention and integrity of personality. A high score means social maturity, responsibility, self-respect, target orientation and personal integrity. A low score means immaturity, destructiveness, unreliability and deficit of internal organizational principles.

The studies have revealed that persons with low self-directedness often suffer from dysthymia and depression. Persons with low self – directedness /SD/ and cooperativeness /CO/ often suffer from personality disorders.

Results and discussion

Basic items in individual dimensions are shown in the charter. There are stated all basic dimensions except persistence /PE/ that was omitted because of its small clinical importance. On the other hand, we left the dimension of cooperativeness for a clinical use and also the dimension of self-transcendence because of important differences between the Czech and the American population.

The number of probands that tend to personality disorder is 73 (13,95% of the group), the number of probands that suffer from the personality disorder is 36 (6,88%). The change of the structure of the temperamental types with intensifying personality disorder is obvious. We may observe the growth of the schizoid temperamental variant in cases of persons with personality disorder. The decrease of the schizoid and cyclothymic temperamental variant patients that tend to personality disorder is very difficult to interpret.

The similar trend was found out by Casey and Joyce (1999) and the explanation could be in lower correlation of self-directedness with these temperamental types. If we consider the patients that tend personality disorder we may say that the passively aggressive, explosive and schizoid temperamental type was the most frequent distribution. The explosive and schizoid temperamental type was the most usual in the category of the patients, that suffer from personality disorder. The percentual distribution of personality disorders approximates members in general population (according to Smolík, 1996).

The standards for the temperamental types

We used three different groups from different time for the percentile standards. We have already described the first group (N = 543) in the pervious sentences. The second, non-psychiatric group consists of 34 women and 91 men (N = 125). The age of the patients in this group is between 22 and 68 years (M = 45, SD = 11). The third group is the oldest. It consists of the patients who suffer from the disorders of the mobile corporal system (the Parkinson disease and the essential tremor). There are 60 men and 31 women (N = 91) in this group and their age is between 48 and 76 years (M = 58, SD = 6). The percentile standards are depicted in comparison with the Americans of the same age (according to Cloninger, 1994a, page 89). In those two groups there is lower distribution of novelty seeking and much lower distribution if self-

transcendence. On the other hand, there is much higher distribution of reward dependence and self-directedness. The last group of the neurological patients has much lower distribution with the American group. On the other, distribution of harm-avoidance is higher than in the American group.

A decrease in novelty seeking and a partial growth of the self-directedness and cooperativeness is more typical for Czech groups in the process of ontogeny. We haven't examined the differences in sex because of the absence of women in the first group (N = 532). Cloninger (1994a) gives the standard scores for TCI for both sex together. He states higher distribution of cooperativeness by women. Brandstrom et al. (1998) has not found any relevant differences in sexes in the group of 1330 persons.

The procedure for practical diagnostic of personality disorders is depicted in the chart. We understand a temperamental type in practice as a general tendency to behave in a specific way. As for the quality it also depends on the difference of individual divergences of the temperamental dimension from the average of the groups. The size of these divergences is very important for the interpretation of the finding. From the clinical point of view we must also consider many other important indicators - the scale of cooperativeness expressed by the dimension of cooperativeness (CO) can be a very important indicator how to predict success of psychotherapy, self-transcendence is related to psychosis and to the problem of perception of reality (Bayon et al., 1996). For the scale of validity of results it is also necessary to take into account the scores of lies. In this case we consider data that are higher than 7 points of the raw score as an irrelevant finding. Intelligence is also very important because individual items in TCI have a very difficult structure sometimes. It's not necessary that a proband with lower intelligence understands these items well.

The process of diagnostics of personality disorders according to TCI:

Administration of TCI

Detection of the level of self-directedness (SD) and the comparison of SD considering the age standards with regard to our three groups.

If there are 1 or 2 standard deviations from the average of the group we interpret it as tending to personality disorder. If SD is worse than 2 standard deviations we interpret this as personality disorder.

We evaluate the deviations of the temperamental dimensions of NS, HA and RD from particular temperamental type.

We confirm or refute the diagnosis of the personality disorder and the specific type of disorder on the basis of the other findings from the investigation and also on the basis of MNK-10 and DSM-IV investigation.

The instrumental casuistic

The man that was 19 years old and that was sent by his family because of the disputes as well as of the real physical attacks had the score of 21 points of raw score of self-directedness in the TCI questionnaire. This score is on the edge of the first standard deviation under the average of the referential group. The scale of novelty seeking was 29 points, of harm avoidance 15 points and the scale of reward dependence was 13 points. These data correspond with the percentile scores NS = 95, HA = 55 and RD = 25. We evaluate this temperamental type as the explosive

one. The structure of his personality is described in the end of the psychological exploration. This tends to the personality disorder, he has the particular features of explosiveness, impulsivity, the small scale of self-directedness, the worse scale of cooperativeness and the worse scale of cooperativeness and the worse reward dependency.

The conclusions

We present a practical psychometric procedure how to define the trend to personality disorder or the personality disorder in connection with the general temperamental type by means of the TCI questionnaire.

The described procedure in connection with the percentile standards can be used in the Czech population for needs of clinical practice.

The results of this method must be always evaluated in connection with other findings, especially with other methods of questionnaire and projection.

F. Lescreve, B. Schreurs: Improving Military Recruit Quality Through Smart Classification.

Belgian Armed Forces – Defence Staff – Personnel Division

Introduction

When a company wants to hire personnel, two different situations can occur: the vacancies for which new personnel are sought can be identical or different. From a selection point of view, the first situation is the easiest one. Some selection criteria can be defined and a simple ranking of the applicants can yield the answer as to who is to be hired. A traditional approach would study the relationship between selection data and performance data of hired applicants and develop a regression model for instance. The applicants with the best-predicted performance would be hired.

In the situation where persons have to be recruited for a set of different vacancies, things can get more challenging. Let's assume that the required abilities to perform well in the different jobs are overlapping and that the applicants are willing to accept more than one job to be hired for. This is a typical situation in military recruitment settings. In such situations, dealing wisely with the available abilities in the applicant group and the required abilities for the different vacancies can yield results that are far superior to the ones obtained with simple methods.

This second situation will be discussed in this paper. The *Belgian Armed Forces' Psychometric Model* is specially designed to deal with such situations. It therefore will be referred to throughout this paper.

Problem definition

The fundamental question

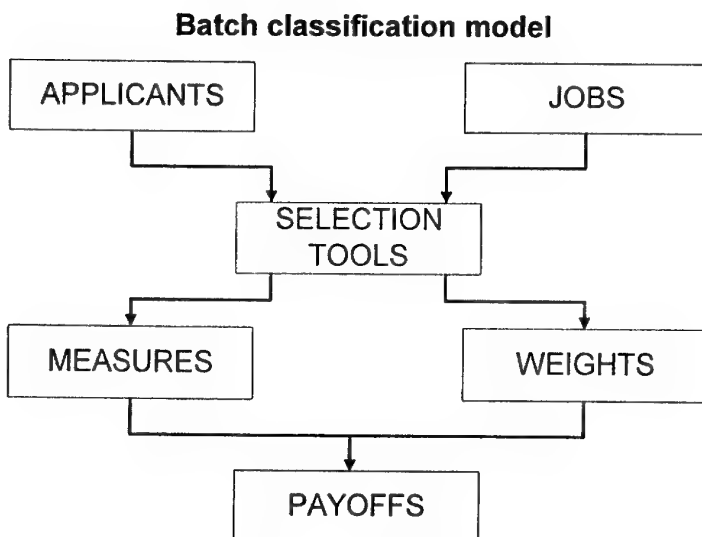
The object of the present paper is each situation in which there are a number of persons who are willing to enlist for a number of jobs. This situation occurs prototypically in most selection and classification contexts where a number of jobs are available and a number of candidates apply for them. But the same type of decision-making process also occurs within organizations

whenever one or more jobs or positions have to be manned and there are personnel members interested or at least available to fill them.

In most practical situations the sketched situation will require some kind of decision making as to **who** will be hired to fulfill **which** job. This is essentially what happens through the selection and classification process. Selection refers primarily to the question whether an individual is qualified or not to fulfill a certain job. Unqualified persons will then be rejected while the qualified ones can be ranked according to the measurement of their qualification. The ones who are best ranked can then be hired. Classification on the other hand is required as soon as different kinds of jobs are involved simultaneously (multiple job environment) and as the candidates are applying for different jobs. Classification systems typically try to quantify the utility of assigning an individual to each particular job and use classification algorithms to decide which applicant will get which job and which applicants won't get a job at all. Clearly, the classification methodology is more generic than the older selection approach, or as Bill Alley²⁰ from the Armstrong Laboratory puts it: 'It should be noted that the present-day concept of classification is broadly enough defined to include selection as a special case.'

Articulating the problem

The general procedure



In most general terms, we can say that the classification problem involves three sets of information: information concerning the persons, information concerning the jobs and information on how to match persons and jobs. These sets of information need to be combined in order to generate information about the utility of assigning each of the applicants to each of the available jobs. The next figure illustrates how this utility (or payoff) can be obtained. An important step is to recognize that both applicants and jobs can be linked through selection tools. When an applicant takes a selection tool (a test for instance), this yields a measure (test score).

²⁰ ALLEY, W. E. (1994) Recent advances in classification theory and practice. In M. G. Rumsey, C. B. Walker & J. H. Harris (Eds.), *Personnel selection and classification*. Hillsdale, New Jersey, Lawrence Erlbaum Associates, Publishers. p. 431

On the other hand, jobs can be distinguished by specifying how important the attribute measured by the selection tool is to perform well in the job. By giving a weight to each attribute measured by the selection tools, a specific job-profile is defined. Combining the measures of a particular applicant with the weights given to a specific job yields the payoff of assigning this applicant to this very job.

Organizational options

The general organization of a selection and classification process has a fundamental impact upon its data modeling and processing. We'll briefly review some of the possible options and their consequences for the data modeling.

Single-tier versus two-tier classification strategies

As denoted by Melody M. Darby et al²¹, a single-tier classification strategy assigns applicants in one step where each applicant receives an assignment directly to an occupational specialty. A two-tier strategy assigns a proportion of applicants directly to specialties and a proportion to occupational areas in the first step. In the second step, applicants with occupational area assignments from the first step are given specialty assignments in the second step. Thus, a single-step assignment strategy employs a single classification algorithm while a two-step strategy must employ two separate classification algorithms, one at the first step and a second algorithm at the second step.

In the Belgian Forces, the S&C systems are basically single-tiered but there are exceptions such as the NCO selection for Army non-technical specialties. These NCO are first assigned to the 'Army non-technical' occupational area and are only assigned to specialties such as the Infantry, Armor, Artillery and so on after a basic military training of about four months.

For the data modeling issue, the consequences of the choice between a single and a two-tiered strategy can be reduced by considering a two-tier system to be made of two independent single-tier systems. The typical reason to use a two-tiered system lays in the fact that additional data that are only obtainable after extended evaluation periods (such as boot camp or initial courses) are estimated to be necessary in order to make the final assignments to specialties. The person-data required for the second step in the two-tiered strategy will therefore consist of original selection data supplemented by assessment data of the individuals during the evaluation period mentioned earlier.

Batch versus sequential classification algorithms

A second important choice to make when designing an S&C system is whether it is necessary to take a decision concerning the assignment of an individual immediately or not. With the term immediately, we mean at the moment that the applicant finished taking his tests, interview and so on and still is at the selection center. This includes that it is not possible to compare all applicants assessed during a certain time frame, so an assignment decision has to be made for each applicant one at a time. This is done by means of a sequential algorithm. Such an algorithm compares the individual to either a shadow population or a set of standards (fixed or adapted to the recruitment circumstances²²) in order to take a decision. The US Navy for instance used the first approach in the CLASP²³ system while the second is in use for the volunteer selection at the

²¹ DARBY, M. M. et al (1996) *User manual: The Generic Assignment and Evaluation Simulator (GATES)*. Armstrong Laboratory/Human Resources Directorate - Technical Paper - 1996-0001, U.S. Air Force., p17.

²² LESCREVE, F. J. (1994) Some Innovations in the Methodology used for Selecting Belgian Volunteers. In *Revista de Psicologia Militar*, Centro de psicologia aplicada do Exército, Lisboa, 1994.

²³ KROEKER, L. P. & RAFAEZ, B. A. (1983) *Classification and assignment within Pride (CLASP): a recruit assignment model*. NPRDC TR 84-9 Navy Personnel Research and Development Center, San Diego, California 92152

Belgian Armed Forces. Batch algorithms work differently. There, the selection data are collected for a large number of applicants and afterwards, an algorithm compares these applicants in order to make assignment decisions. The simplest form of batch algorithms is the sorting of the applicants according to a single criterion. From a theoretical point of view, sequential algorithms are less powerful than batch algorithms because they don't work with the exact population of available applicants.

Other options

All combinations of the presented options are theoretically possible, however the use of a sequential algorithm in a second tier doesn't make that much sense and it is no wonder that we couldn't find an actual example. Next table summarizes the mentioned possibilities and gives examples of such systems.

Tiers	Algorithm	Example
1	Sequential	US NAVY, Belgian Volunteers
1	Batch	Belgian Officers
2	Sequen. - Batch	US Air Force
2	Batch - Batch	Belgian NCO (Army non-technical)

Quite a number of other possible options have an influence upon the required data modeling. These include for instance the use of job-quota, priorities for filling certain jobs first or with the best applicants, priorities attributed to certain applicants (for instance applicants who already are in the military), minority fill rates etc. We won't go into details concerning these types of options since the model we'll develop is intended to be sufficiently generic to be able to cope with these particular settings.

In summary, what we are about to describe further is the generic batch classification system used by the Belgian Armed Forces.

Method

In this section, we'll describe the 'Belgian Armed Forces' Psychometric Model' briefly. The development of this generic Model started in 1992 and is in effective use since 1995.

The Model definition

In the Model definition phase, all elements that will be used by the Model have to be defined.

These include:

The selection and classification variables (both metric and categorical);

The vacancies;

The selection criteria and weights for the different vacancies

The applicant data

When the Model is defined, the applicant data can be added. All data for all candidates has to be added to the Model. The Model accepts data in MS Access database format²⁴. Once the required database tables are imported, the Model verifies whether the required data is present and complies with the given maxima and minima specified in the Model definition.

The payoff computation

The next step consists of computing the payoff for all possible applicant-job combinations. This is achieved using a generic formula consisting of three parts: an additive part allowing for the

²⁴ More details on how the data are presented to the Model can be found in Lescreve, F. *Data modeling and processing for batch classification systems*. in *Proceedings of the 39th Annual Conference of the International Military Testing Association*, 1997, p 261-268

introduction of a general linear model, a multiplicative part permitting the use of coefficients for categorical data and a third part intended to correct the payoff for the expressed preferences. This is the generic formula:

$$Y_{ij} = \left(\sum_{m=1}^u \beta_{mj} \cdot X_{im} \right) \left(\prod_{c=1}^v \gamma_{cij} \right) \left(\prod_{p=1}^w [((X_{ijp}/X_{\text{Maxjp}}) \cdot \phi_{pj}) + (1 - \phi_{pj})] \right)$$

Y_{ij} is the payoff-value of person i for job j ;

m (1 to u) represent the metric variables;

β_{mj} is the weight given to variable m for job j ;

X_{im} is the score of person i on variable m ;

c (1 to p) represent the categorical variables;

γ_{cij} is the coefficient given for job j to the category of variable c to which person i belongs;

p (1 to w) represent the variables concerning the preferences;

X_{ijp} is the expressed preference of person i for job j on variable p ;

X_{Maxjp} is the scale maximum of X_{ijp} . The reason why this is required, is to obtain a maximum value of 1 for the expression X_{ijp}/X_{Maxjp} ;

ϕ_{pj} is the weight given to preference variable p for job j ;

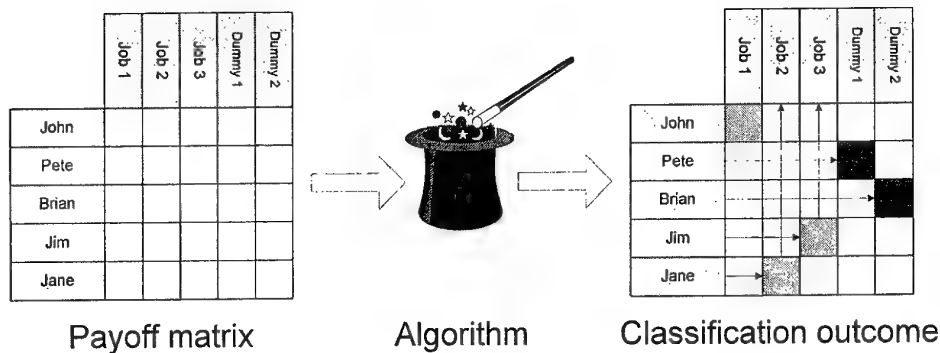
The multiplicative part and the part referring to preferences are optional. The additive part is required but can be replaced by a constant valid for all persons if necessary.

This formula can deal with rejection due to categorical data or preference data but not with rejection as a result of non-compliance with minimum or maximum values for metric data or zero preferences. In these cases a previously computed payoff will have to be set to zero.

The matrix optimization

The output resulting from the payoff computation is a matrix in which each cell indicates how desirable it is to assign the applicant in the row to the job in the column²⁵. The solution to our S&C problem is obtained by maximizing the sum of the payoffs in the cells linking an applicant to a job (the green cells in the right matrix). Since in most S&C situations, there are more applicants than jobs, the matrix has to be squared by adding dummy jobs. Applicants assigned to those dummy jobs are rejected (the red cells in the right matrix).

Batch classification model



The algorithm needed for the matrix optimization is one derived from the so-called Hungarian method to solve the traveling salesman problem. Several possibilities are available such as the Ford Fulkerson algorithm for quota or Linear Programming (LP). The algorithm we currently use is the one developed by Burkhard, Derigs et al.

This approach guarantees that the best possible classification is reached, given the measured attributes of the applicants and the expressed desirable attributes for the jobs.

The immediate quality assessment

One of the major advantages of batch classification is that the quality of the reached solution can be assessed before the applicants are informed about the outcome. The complexity inherent to a batch classification system makes it rather inappropriate to summarize its quality by a single overall value. In many cases the practitioner will be better off with a series of indicators each focusing on a specific aspect of the classification quality. Such indicators are indeed available and can be grouped according to the moment at which they can be obtained.

Some indicators depend on data that are not available at the time the classification algorithm is performed. These criterion data typically comprise attrition rates and performance measurements. Quality indicators based on such data include predictive validity coefficients of the payoff-values, differential validity of predictors, logistic regression models against pass-fail criteria, cross checks of the used linear models, etc. Such quality indicators can be called *delayed* or *a posteriori* indicators.

Other quality indicators do not require data that aren't available immediately after the classification algorithm runs. These can be labeled *a priori* or *immediate* quality indicators. These indicators are less powerful than the ones relying on criterion data and cannot provide the practitioner with final statements concerning the quality of the used system, but it offers one tremendous advantage: it allows him or her to modify certain parameters used in the classification model before the assignment decisions are carried out. Put in other words, these indicators allow to detect problems in the classification outcome and to rectify them by altering the parameters of the classification system. The classification model can subsequently be rerun until the classification quality is acceptable. It is only at that time that the applicants are informed of the outcome.

Following immediate quality indicators are included in the Psychometric Model²⁶:

The Fill rate

The Mean Predicted Performance (MPP)

Descriptive statistics for the groups assigned to the trades

Respect of the applicants' preferences

Respect of the requested job profiles

Specificity of the requested job profiles

The output

When the quality of the reached classification is considered acceptable, the results can be communicated to the applicants. For that purpose, the Model provides the user with a number of possibilities: lists can be printed or database tables can be exported for further use.

A situation to which the practitioner can be confronted is that of an applicant that is accepted for a specific vacancy and who decides not to sign on after all. In such a case, somebody else has to

²⁵ Of course, the necessary standardizations are performed during the whole process to ensure that data can be compared.

²⁶ For more details, see Lescreve, F. *Immediate assessment of batch classification quality*. in Proceedings of the 40th Annual conference of the International Military Testing Association

be looked for to replace the first one assigned to the job. This is quite easy in the Psychometric Model. Since payoffs were computed for all applicant-job combinations it is possible to rank the applicants according to their payoff for a specific job. That is exactly what happens. When a person was assigned to job x but is no longer interested, the applicants who aren't assigned to a job already, are ranked according to their payoff for job x. The candidate with the highest payoff is then assigned.

Results

The results obtained through smart allocation using the Model as described above are consistently superior to those obtained using sequential methods or simple classification methods (such as a unique ranking of the applicants whereby the applicants are assigned to a job according to their ranking and their preferences). It is particularly striking that our classification model on average better respects the preferences of the applicants than by models primarily based on sequential allocation according to the expressed preferences.

Conclusions

The experience accumulated over the last decade in designing and applying smart batch classification is so positive that we cannot but encourage practitioners to leave more traditional S&C systems to study and implement more powerful systems that ultimately improve the quality of the assigned recruits.

Dylan Schmorrow, George Solhan, Jim Templeman, Laura Worcester, James Patrey:
Virtual Combat Training Simulators for Urban Conflicts and Performance Testing.

*Naval Research Laboratory
Potomac Institute for Policy Studies
United States Air Force Academy*

Key Words

Virtual Environments, Simulation, Close Quarters Combat, JSAF, STOW

ABSTRACT

Advances in technology are enhancing our ability to create realistic Virtual Environments (VEs) in which Sailors and Marines can train skills that are too costly, dangerous or otherwise impossible to practice. These capabilities will become even more important in the future as budgets and time for training decrease. Science and Technology in this area will help to leverage and extend virtual technologies so that the Navy is optimizing their use in training.

This effort demonstrates the power and effectiveness of applying Virtual Technologies and Environments to training. It focuses on developing two basic elements of VE training technology: (1) improving the quality of interaction provided by VE, and (2) applying advanced training aids and methodologies. Advanced training aids and methodologies are being developed to derive full benefit from the flexible new medium of VE. This effort is developing, demonstrating and transitioning virtual and augmented technologies for training supplementing and complementing live combat training.

1.0 Introduction

Increasing demands are being placed on individuals functioning within small teams. Today's warrior must quickly adapt to diverse situations, ranging from high intensity warfare to peace keeping missions. Modern weapons amplify lethality, while global politics amplify the consequence of actions. Advanced training systems are required to prepare individuals to meet these demands. Virtual Environment (VE) technology offers a new means of training small unit teams. VE technology provides a way to build realistic combat simulators for small units to train skills and rehearse a variety of mission scenarios that are too dangerous, costly, or otherwise impossible to practice. These capabilities will become even more important in the future as budgets and time for training decrease.

This effort will demonstrate the effectiveness of applying Virtual Technologies and Environments (VIRTE) to training. It focuses on developing two facilities central to applying VE technology to training: (1) improving the quality of interaction provided by VE, and (2) applying advanced training aids and methodologies to real Navy and Marine Corps requirements. Quality interaction is essential for making VE usable for extended training and for applying VE technology to build combat simulators. Advanced training aids and methodologies will be developed to derive full benefit from the flexible new medium of VE.

Interaction with VE involves the ability of individuals to effectively perform essential sensory-motor tasks within the virtual world. More specifically, this can involve the ability to move about VE, manipulate virtual objects, locate virtual sounds, deal appropriately with physical constraints, or perform visual tasks (i.e., discriminate colors; judge distance; search for, recognize, and estimate the size of objects). Interaction technology includes multi-modal 3D displays and input devices, real-time rendering, and distributed simulation. Interaction techniques define how this technology portrays the environment and responds to users actions. The design, synthesis, and analysis of new interaction techniques will be based on our growing understanding of human perception and action in VEs. Tools are needed to provide a more comprehensive assessment of the quality of interaction.

Interaction techniques are being developed for use in combat simulators that resemble direct, natural interaction of a person with the real world. Infantry simulators facilitate training in close quarter battle (CQB), close air support, naval surface fire support, special operations, forward observer/forward air controller, and other skills at the levels of tactics, techniques, and procedures. VE based simulators of vehicular platforms are used for training in shiphandling, airborne, amphibious, and ground combat vehicle operations.

Advanced training aids and methodologies are essential for reaping the full benefits of VE. Visualization techniques inject additional information into the user's view of a simulated environment to enhance the user's perception of what is going on and convey additional context. Auxiliary, mission critical information can be added to provide additional insight and convey status information and directives from higher command levels.

2.0 VIRTE Objective

Virtual Environments present realistic simulations of interactive scenes. The Office of Naval Research Human Systems Department has ongoing efforts aimed at developing VE systems to provide readily available, low-cost, and portable devices to train personnel on a broad range of operational and other skills. Training activities range from maintenance operations to situational awareness and decision strategies in a battlefield setting. VEs provide opportunities to train in situations that are either too costly or impractical to execute with traditional types of training exercises. VEs enable trainers to measure performance more accurately and efficiently than can be done through traditional training regimens. Having such performance measures and additional training opportunities before going into live missions has a significant impact in timesavings, accident prevention, and survivability. Among the products of the ONR VE program to date are VEs to train operators in submarine piloting, shiphandling, and remotely operated vehicle piloting.

3.0 VIRTE Components

VIRTE prepares warriors and teams to win in direct contact with the enemy by training in battle skills, tactics, techniques, and procedures.

3.1 Capability Definition

VIRTE provides realistic combat simulators for a variety of missions as a supplement and complement to live training. It focuses on Navy and Marine Corps warriors and small teams (the Human System rather than the weapons platform) to increase performance in skills that are too dangerous, costly, or otherwise difficult to train. VIRTE systems will be deployable and allow near-real-time mission planning and rehearsal in the expeditionary theater of operations.

3.2 Requirement / Capability Gap

Individuals functioning within small teams face increasing physical, emotional, and intellectual demands. Modern weapons and systems amplify lethality and battlespace fluidity, while worldwide engagement in peacekeeping and anti-terrorism operations, amplify the consequences of actions. Advanced training systems are required to prepare warriors to meet these demands by training like they fight. These capabilities will become even more important in the future as live-fire training areas, budgets, and time for training decrease.

3.3 Fundamental Science and Technology

Interaction technology includes multi-modal 3D displays and input devices, real-time rendering, and distributed simulation. Interaction techniques define how this technology portrays the environment and responds to user actions. The design, synthesis, and analysis of new interaction techniques will be based on our growing understanding of human perception and action in VEs. Interaction techniques will be developed for use in combat simulators that resemble direct,

natural interaction of a person with the real world. Dismounted warriors will interact with the vehicle-based simulations, as well as with the enemy, friendly forces, and non-combatants, but in a hybrid live/virtual environment.

3.4 Technologies being addressed by others

There is no other effort to create a full-immersion perceptual illusion for the human trainee, incorporating tactile, auditory, visual, haptic, environmental, and other interactions. There are, however, components of related efforts will be exploited.

4.0 Technical Approach

4.1 Background

The ultimate manifestation of virtual technologies and environments is a Star Trek Holodeck where simulations can be run that are indistinguishable from the real world. Today's technology is far from that vision, but there are many advanced technologies that can be used today to greatly improve the realism of simulators and more importantly their training effectiveness.

The Navy has focused its Science and Technology to support Future Naval Capabilities (FNC). Capable Manpower is the FNC focus area that concentrates on using advanced technologies to recruit, train, and retain the best Sailors and Marines possible.

The most important part of any training system is a thorough understanding of the requirements. VIRTE has planned extensive requirements analysis and has matched emerging technologies with training requirements. Since program resources are constrained, solutions that are "good enough" for the intended purpose of tactical team training will be implemented in the simulators and the synthetic battlespace within which the simulators will interact. The resulting "system" will be specified and transitioned to VIRTE customers.

4.2 Concept of Operations

The VIRTE program consists of three demonstrations. Demonstration I addresses land and sea vehicles and weapons systems with a focus on human interaction with these systems. Demonstration II addresses Close Quarters Battle (CQB) for Military Operations in Urbanized Terrain (MOUT). Demonstration III addresses full spectrum combat where simulators interact within an operationally relevant Joint Synthetic Battlespace (JSB) to represent infantry, Special Operations Forces (SOF), Naval Surface Fire Support (NSFS), Close Air Support (CAS), Helicopter Assault Support, and Helicopter Attack Operations in a combined arms naval expeditionary force.

The concept of operations for the VIRTE Demonstration is to employ existing modeling and simulation (M&S) technologies to rapidly develop an expeditionary warfare (EW) combat simulator that can be evaluated for training effectiveness in an operationally relevant JSB. Training deficiencies of the prototype will be identified that either impact the quality of training provided to the vehicle crew, or the capability of an expert instructor to support crew training or

evaluate crew performance. Candidate novel M&S simulation technologies will be identified that can be integrated into the simulator to increase team training effectiveness. The increase in team training effectiveness versus the cost of the novel M&S technologies employed to realize the increase will be assessed to determine relative cost-benefit. Finally, simulator specifications will be developed based on the results of training effectiveness increases gained through application on novel M&S technologies. VIRTE customers can then employ these simulator specifications as the basis for simulation training system acquisitions.

VIRTE Requirements

The development strategy for VIRTE is to identify and implement the minimum level of functionality for each VIRTE system component to provide individuals with an effective means to perform tactical team training in an operationally relevant environment. Care is being exercised to not "over-engineer" VIRTE system components since training system cost and deployability are critical factors.

Patrick Boss: The Swiss Army Outdoor Assessment Center for the Selection of Future Officers.

University of Zurich, Dept. of Applied Psychology

1. Swiss Army's cadre recruitment in transition

One of the goals of the recruiting procedure of the new Swiss Army XXI is to support the selection process for admission to military leadership schools through a detailed leadership-related aptitude clarification. The main reason for the implementation of this new tool is a projected change in the formation of future officers and non-commissioned officers. In the present Swiss Army, everyone has to complete 15 weeks of military basic training. Future NCOs attend a military school for six weeks followed by another 12 weeks of military basic training, but now in their new function. During that period, NCOs are evaluated by professional officers. NCOs selected for officer training have to complete a leadership school for 17 weeks followed by further military basic training for 16 weeks. After these schools, every associate of the Swiss Army has to participate every second year in a total of ten refresher courses of a three-week duration.

In the present system there is always ample time to observe the soldiers during military service. The main disadvantage here is the great difference in the number of days of military service required of soldiers (300), NCOs (460), and first officers (770). Changes in society, politics, and the economy have lessened the importance and significance of a military career, so that every year up to 40% of recruits have to be forced to become NCOs. For that reason, in Swiss Army XXI the number of days of military service of NCOs and first officers will be reduced. To attain this goal, recruits with leader potential will leave military basic training after six weeks and attend a military leadership school. Again after two weeks there will be a separation of future NCOs and officers. With this new selection process, there will be less time for professional officers to observe the recruits, which will result in a weaker basis for the decision on who will become an NCO or an officer. Thus, leadership-related aptitude clarification will provide

important support for the decision-making process for admission to military leadership schools. This selection process will consist of the following components:

Results from recruitment assessments: intelligence testing and a leadership questionnaire assessing the following dimensions: social contact ability, frustration tolerance, achievement of dominance, responsibility, conscientiousness, independence, achievement motivation, and the ability to work under pressure.

observations during recruit and aspirant basic training by professional officers, and results of assessments at the new Swiss Army Outdoor Assessment Center (SAOAC; officer aspirants only).

The present discussion focuses on the construction of the SAOAC only. The author and two students at Department of Applied Psychology are currently drawing out a detailed concept for the construction and implementation of the SAOAC. The following description thus reflects initial conceptions on how the SAOAC could work and how it could be constructed. It is meant to serve as a starting point for further discussion and development.

2. Construction of the SAOAC

The conception of the Swiss Army Outdoor Assessment Center is similar to traditional assessment centers, although of course the contents of the exercises aspirants will be asked to complete are military-related. Assessment is in fact based on more or less the same procedures professional officers use to decide who will become officers. The main differences are that the exercises will be standardized and that semiprofessional observers will be employed. The project leader of the new Swiss Army recruitment set the prerequisites for the new assessment center as follows:

Assessment by the recruiting team must support the decision-making process for admission to military leadership schools.

Aspirants should report to the recruiting center for one day of assessment of leadership potential. This day of assessment at the recruiting center has to be a challenging experience that will leave a lasting impression on the aspirants.

The entire infrastructure of the recruiting center must be available three times a year for two weeks.

As a first step in constructing the SAOAC, important psychological dimensions of military leadership have to be specified. An empirical study by Annen (2000) on estimation and promotion in Swiss Army provides a useful starting point. Annen interviewed commanders on important psychological dimensions of future officers in Swiss military schools and distinguishes two principle areas, self- and social competence and leadership:

	dimensions	sub-dimensions
self- and social competence	personal attitude mental abilities social behavior	reliability, independence, integrity problem solving, planning competence team ability, conflict management, co-operation

leadership	ability as leader	ability to work under pressure, fairness
	communication	discussion behavior, information management
	leadership techniques	delegation, control
	ability as instructor	goal orientation, teaching ability

Taking these findings as a basis has the advantage that the same dimensions can be used for both the selection and promotion of officers.

In a second step in constructing the SAOAC, these psychological dimensions have to be transformed into concrete assessment center exercises. Although construct validity problems are reported, each of the dimensions should be assessed in at least two exercises by different observers.

The third step consists of the construction of the different tasks that will make up each exercise. In addition, rating forms and guidelines to be used by the observers have to be worked out. Another task for the constructors is to write a brochure for assessment participants that will provide detailed information on the SAOAC. The decrease in predictive validity caused by increased transparency of the AC (Kleinmann, 1996) will be compensated by implementing a test measuring logical intellectual power.

To accomplish the construction, several test runs are planned to check the schedule and to improve the training of the observers and the rating forms observers will use to formulate their observations.

3. Implementation of the SAOAC

The SAOAC will conduct assessments three times a year for two weeks in each of the six recruiting centers in Switzerland. Per day of assessment and per recruiting center there will be about sixteen aspirants taking part.

The plan is for aspirants to report to the recruiting center at 6 o'clock p.m. the day before the assessment exercises take place. After dinner and a brief presentation of information on the program and the goals of the SAOAC, the aspirants will solve case studies of various military tasks until midnight. In these exercises they have to write down how they would respond to difficult social situations, such as refusals to obey an order, and also solve planning tasks, such as a displacement of a section with only two vehicles with limited transport capacity.

At 5 o'clock a.m. after a short night and a small breakfast, the aspirants have to perform a long distance orientation course for two hours. After that physical test, they will have one hour to take a shower and to have breakfast. The core part of the assessment center exercises will start at 8 o'clock. As a first exercise the aspirants – divided into four groups – will have to pitch a big command tent that will be used as a shelter by the observers. From then on until 4 o'clock in the afternoon, the aspirants have to carry out the exercises at various locations where the observers register their behavior. These exercises will include, for instance, giving a presentation, giving a

short instruction, group discussion in a leaderless group, and participating in a role-playing exercise.

After the assessment exercises, logical intellectual power will be assessed using flow-charts that the aspirants have to analyze. In addition, aspirants will take a test assessing concentration. It is supposed that the stressful day will result in a wide range of scores by the aspirants and provide good indications of the aspirants' abilities to work under pressure. At the end of the SAOAC, each aspirant will have the opportunity to discuss his performance with one of the observers and to receive feedback.

One short note on the formation of the observers: The plan is to recruit suitable militia soldiers to become observers. Teachers and university students studying psychology are considered as a suitable target population for this job. Instead of normal military service, they will participate in a training course and do their military service at the recruiting center. Responsible for the formation and engagement of these observers, as well as for the complete organization and carrying-out of the SAOAC, is the chief psychologist at the recruiting center.

4. Main advantages of the SAOAC

Why construct an assessment center and spend a lot of money to carry out the assessments? A computer-based test-battery combined with a structured interview could provide similar results in a shorter time with an even higher validity. The following points defend the idea of the outdoor assessment center:

Social and face validity will be extremely high because of the military-related contents of the exercises and the outdoor assessment.

Negative results can be communicated more easily to the aspirants because they can be related to concrete behavior.

Aspirants who gain admission to the officer leadership school can be truly proud of themselves, because they "survived the SAOAC."

A standardized and demanding officer selection procedure will earn a high reputation with the public in Switzerland.

Falář Josef, Miroslava Klabanová, Bolek Emil, Dvořáková Květa: Monitoring of the Drug Abuse Among Conscript of the Czech Armed Forces.

Sports Research Institute of the Czech Armed Forces

The following contribution is designated to the first thematic area (the recruitment problems as well as social policy in order to sustain and develop human resources in the Army).

The main objective of the project presented by CASRI (Sports Research Institute of Czech Armed Forces) is to monitor drug abuse and social pathologic disorders of conscripts in the designated recruitment periods. The results are submitted to the highest levels of the Czech Armed Forces command as well as to the army branches and training units.

During the last year, there were diagnosed 6.522 conscripts in the fourteen training battalions of the Czech Armed Forces. A group of conscripts was compared to the overall number of examined persons from a period 1996-2000. This sample presents 61 029 persons and consists of children, youth, recruits and conscripts. The overall results highlighted inclinations to socially tolerable drugs (tobacco and alcohol) and intolerable drugs. It also pointed out a wide scale of lifestyle conditions that are related to social pathologic disorders.

Another part of the research that started in 1996 was focused on the comparison of the monitored group of conscripts with different groups of the Czech population.

CASRI (Czech Army Sport Research Institute) Prague provides the research focused on the Army of the Czech Republic and targeted to find out the following phenomena:

social pathologic phenomena - drug use (socially tolerable and socially intolerable drugs), gambling, risky sexual behavior, lifestyle, social background, actual state of mind, leisure time activities and ease of access and participation.

Main objectives of this research are:

monitoring of the above mentioned areas whenever recruits enter the army, submitting of the research results to the command of the army as well as to all commanding officers. Research results are also passed to psychological and humanitarian bodies that are responsible for drug prevention of social pathologic phenomena in the army, ongoing research that is able to highlight phenomena dynamics, comparing of conscripts' files with different files such as elementary school, college, military college students, recruits records), monitoring of social pathologic phenomena targeted to military colleges in order to use these results for the development of a useful drug prevention policy, consulting and submitting of research results to the army institutions and bodies that are responsible for anti drug policy development in order to create the conception of prevention against social pathologic phenomena in the army, consulting about results with the state institutions and political bodies that collaborate on solving social pathologic phenomena problems in our society.

A data collection is provided by the DROGAN-SF questionnaire. This anonymous screening questionnaire enables personnel to diagnose social pathologic phenomena as well as their connections with underlying conditions. It also provides data elaboration through software applications. Outputs can be taken in numerical or alphabetical forms. There is also the possibility to obtain graphical outputs that enables a better orientation and overview.

Screening was carried out in the four periods - January, April, July and October 2000 (These periods are the same as the entrance times of the army conscripts). In these periods, 6.522 conscripts were examined. A final file was compared with another files of the population that had been monitored since 1997:

elementary schools students (17,406 aged 13 to 15 years),

college students (24,546 aged 15 to 18 years)

military college students (1,122 aged 15 to 18 year)

new recruits (3,270 aged 18 to 20 years)

conscripts (9,421 aged 18 to 24 years)

Last year, a monitored file of conscripts entering the army consisted of 6.522 males with an average age of 20.

Finished education:	Elementary	8%
	Skilled worker	49%
	College	36%
	University	7%
Occupation before entering the army:	Workers	31%
	Students	29%
	Unemployed	28%
Place of residence:	Cities, towns	62%
	Villages	38%

The research results show that before entering the army 47.02 % conscripts tested last year had experiences with use of socially intolerable drugs. It is 1.52 % more than in an overall file of conscripts tested from 1997 to 2000. It indicates an increasing trend of using socially intolerable drugs. (See graph one)

Conscripts mentioned these socially intolerable drugs:

Marihuana	94.6%
Hashish	32.2%
LSD	21.0%
Hallucinogenic mushrooms	19.5%
Pervitin	14.4%
Combinations of drugs and alcoholic beverages	16.1%
MDMA, Extasy	12.5%
Heroin	3.2%
Sniffing of evaporated substances	3.0%
Cocaine	3.0%
Efedrin	2.4%

The most experienced group of conscripts before recruitment (50.34%) is the group of conscripts that in the logistic unit used for guarding and protection of important military installations. On the other hand, the lowest average rate of drug users (40.61%) is among conscripts entering duty in the training battalion of the Czech MoD. Other branches of the Czech army have an average from 47.03% to 47.71% of conscripts experienced with drugs. (See graph 2)

2.22% of conscripts regularly use socially intolerable drugs. It is 145 conscripts out of 6.523). It is 0.4% more than in the file of conscripts tested in 1997; therefore, we can make a conclusion that there is an increasing trend of regular drug use. (See graph 3)

There are following reasons presented by conscripts:

Curiousness	54.1%
Boredom	35.7%
Lack of will	32.6%
Desire to be like celebrities	23.0%
Desire to be "in"	20.3%
Desire to be "free"	19.1%
Inability to solve own problems by another way	18.7%
Effort to copy friend's behavior	15.8%

The index of leisure time activities indicates potentially unsuitable choices that do not lead to drug prevention. It shows that conscripts, before entering the army, preferred leisure time activities where drugs were very often offered (restaurants, pubs, disco clubs, hot spots etc.). The results of our research show that conscripts bring their experiences with drugs to the military environment; however, there is an evident stagnation in the socially tolerable drug consumption such as alcohol and tobacco products. On the other hand, there is an evident increasing trend of the socially intolerable drug consumption!

The results also show that problems of drug users are becoming serious problems to solve. Moreover, it shows that the project with its main objectives is important.

This year, screening continues and we expect that there are going to be about 8.000 conscripts and military college students monitored.

Murray W. Rowe: Battling U.S. Navy Attrition through Science and Technology.

Navy Personnel Research, Studies, and Technology (NPRST) Millington, TN USA

Each year, the United States Navy enlists around 55,000 new recruits. The majority of the recruits range in age from 18 to 21 years. Around 80 percent are male. Most are white. They come from every state and some are foreign nationals. Over 90 percent have a high school diploma and over 60 percent score in the upper 50th percentile on the standard aptitude test. For many recruits, enlisting in the Navy represents their first significant work experience and their first extended time away from home. All entered the Navy with the desire and expectation to succeed. But, today 4 out of every 10 new recruits do not complete their initial service contract (typically four years). Two of ten do not complete recruit training or "boot camp". Leaving the service before completing a service contract or "attrition" has reached epidemic proportions in the Navy. The losses place profound pressure on recruiters to find replacements at a time when attracting 55,000 annual recruits is difficult if not impossible. With fewer motivated Sailors successfully reaching the end of their contracts, the number of reenlistments has declined as well. The Chief of Naval Operations, Admiral Vern Clark, recognizes this problem and has mounted a broad "War for People", with a significant campaign being waged against attrition. This campaign includes a number of near-term initiatives including several remedial programs. But, a cornerstone of the war against attrition is a comprehensive and integrated science and technology program intended to increase the "bond" between a Sailor and the Navy and significantly reduce attrition.

To appreciate our approach, let's take a deeper look at the attrition problem. Figure 1 shows the 40 percent recruit cohort attrition displayed across the first term of service.

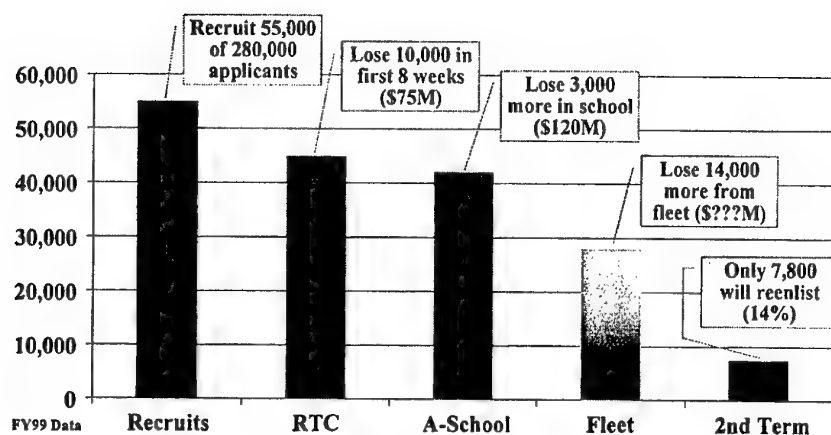


Figure 1. Navy First Term Attrition

While one-half of the attrition losses occur early on during recruit training, the other half are spread across skill training and operational assignments in the Fleet. These latter losses are particularly expensive given the compensation and training investments incurred. It is also vexing to have Sailors complete a training pipeline only to leave the Navy just when that training is expected to pay off. Official Navy personnel data show that medical, psychological or behavioral, and academic problems represent the primary reasons for attrition. However, on closer examination, we believe these administrative reasons are simply masks for more fundamental problems that begin with the selection of the individuals and their classification into skills.

Several prominent indicators suggest that Navy enlisted selection methods are poor and are a likely cause of some attrition. First, early attrition is high (20 percent of each cohort attrites in recruit training). These excessive losses suggests that Navy screening methods and quality standards are inadequate, allowing too many young people who are incompatible with military service to enter the Navy. The burgeoning number of special programs that have been established to control recruit training attrition corroborates this evidence. Finally, about 30 percent of the attrition is attributable to pre-existing medical and psychological conditions. In

other words, with better recruit screening, the Navy could have avoided a sizeable portion of the problem.

But, the Navy contributes to the attrition problem even more with an inadequate and antiquated process that classifies recruits into specific Navy skills and training pipelines. Several indicators support this claim. The Navy's training establishment has increased the number of special programs to deal with academic failure. As "setbacks" have increase so too have remedial programs. Job satisfaction, as reported by several navy personnel surveys, is low. Experts in the Fleet routinely complain that skill performance of new Sailors has declined. Taken together, these factors help explain why first-term reenlistment or "retention" have declined.

Today when a young person visits a Navy recruiter and expresses interest in the Navy, he goes through a screening or "selection" process. The process includes taking an aptitude test (ASVAB), presenting evidence of high school graduation (or not), and passing a medical exam. Based on successful results, the recruits is passed to a "classifier" who conducts a counseling session with the potential recruit to try to get them to sign a Navy enlistment contract. This counseling session last on average about 10 minutes. During this session there is neither time nor motivation to thoroughly examine the recruit's interests or personality (factors that have been shown to contribute to job satisfaction and retention). The classifier's primary goal during this session is to fill Navy jobs. But, consider what is determined during those 10 minutes—the recruits' training, the time he will spend at sea, the time he will spend away from family and friends, his compensation, and in many cases the likelihood that he will reenlist later.

Clearly we believe the current classification process is inadequate. The procedures all focused primarily on recruiters and the Navy. Classification decisions are based on too little information about applicants. Our science and technology program is based on two key premises: (1) obtain a greater breadth of information on applicants and (2) use more information in making Sailor-job matches. The goal is to use the classification process to establish a strong bond between the recruit and the Navy. Today those bonds are often weak and easily broken.

Whole Person Assessment

NPRST is developing and incrementally implementing a new enlisted selection and classification system for the Navy. The new system, known as "Whole Person Assessment" (WPA), will make the best possible training and career assignments for new recruits by maximizing the use of their personal characteristics. Reduced attrition, increased career satisfaction, retention, and Fleet readiness are all expected outcomes from this new capability.

We all know from our own work experience that success depends on more than basic knowledge or aptitude. Unfortunately, the Navy classifies people largely on the basis of ASVAB scores. But, these aptitude scores represent too narrow a range of human performance for assigning people to training or career paths. WPA is designed in part to augment current information with additional information on intellectual skills such as time sharing ability, complex problem solving and spatial ability. In addition, WPA is assessing factors associated with personality, social intelligence and judgment, and cultures and values. Finally, WPA will

assist applicants and classifiers in making assignments based on profiles of interests that closely match those of satisfied and well-performing Sailors.

Figure 2 shows the breadth of the information that WPA will collect and use in the classification process compared to the current process.

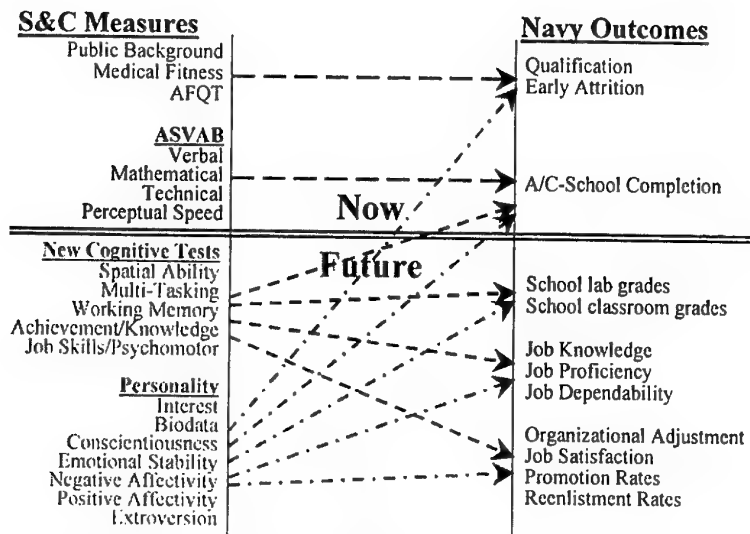


Figure 2. Instruments to be included in Whole Person Assessment

WPA has several key components: Rating Identification Engine (RIDE), Jobs and Interests in the Navy (JOIN), and "First Term", an effort to fundamentally understand the relationship between young Sailors and the Navy.

The RIDE classification model tries to make Sailor and job matches that maximize training success. But, rather than looking at conventional training grades, RIDE measures training success by a more meaningful measure, by the number of setbacks or "first pass pipeline failures". Depending on the skill areas, first pass failures range from 6 to 18 percent. By using this new outcome measure and a new algorithm, the initial version of RIDE has already demonstrated that it makes more successful classification decisions based only on the limited aptitude information avail today. For example, using RIDE in a simulation of FY1996-1998 recruit classifications, RIDE flagged 40 percent of the classifications made during those years as first pass failures or poor classifications.

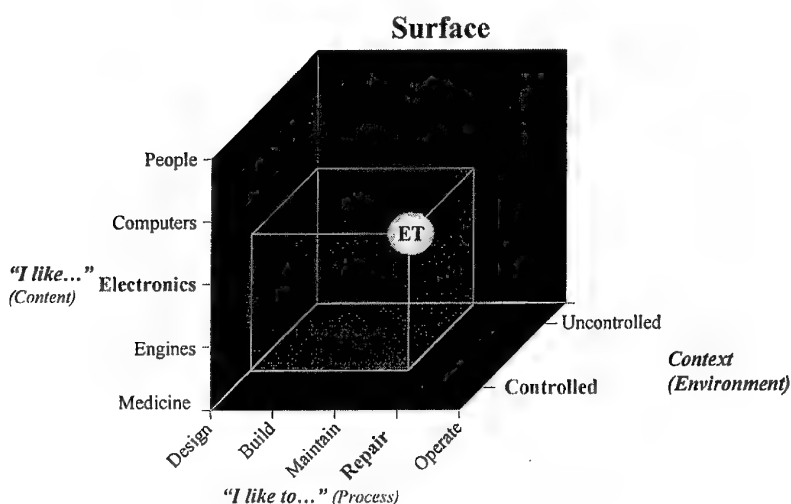
But the real contributions of RIDE will come with the addition of other cognitive, personality and interest information. NPRST has recently developed and is validating a Navy-specific interest inventory known as JOIN. JOIN segments the universe of Navy interests into several key categories:

Context or Community (Submarine, Surface, Aviation...)

Content (Customers, Team Members, Patients, Computers, Engines, Legal...)

Process (Design, Build, Operate, Maintain, Repair)

By answering items in the inventory, applicants are associated with specific ratings that match well with their preferred context, content, and process characteristics. Figure 3 shows a notional applicant that expresses interest in electronics, likes repair work, prefers a controlled working environment, and likes the idea of surface ships would match well with the Electronic Technician (ET) rating.



**Figure 3. Example of Jobs and Interest in the Navy (JOIN)
Inventory Results**

Beyond JOIN, RIDE will include non-cognitive measures of personality and social competency related to teamwork, Navy adaptability, leadership, and job performance. The Social and Military Suitability Battery will be used to screen out some candidates with a high probability of attriting, but will also inform better classification decisions.

RIDE and JOIN are currently in test and evaluation at two Military Entrance Processing Stations (MEPS). Eventually, we expect that recruit classification will shift from the MEPS to recruit training, providing more time to gather information on recruits and provide adequate career counseling.

To complement the RIDE/JOIN effort, we are also conducting a comprehensive investigation of attrition. Understanding attrition entails getting beyond the nominal institutional reasons for attrition and documenting its root causes.

First Term begins with the hypothesis that recruits with good person-organization (P-O) "fit" are more likely to stay in the Navy. Those with poor fit are at risk for attrition. First Term measures P-O using a host of individual and organizational attributes. The project exploits both a longitudinal and a cross-sectional research design. During the experimental stage we will track an entire enlisted recruit cohort from just before they enter the service through the end of their first-term of service or until they attrite, whichever comes first. The cross-sectional approach will sample Sailors at selected points during their first term of service. Data collection will include a transition survey that measures the influence of a variety of factors on an individual's decision to stay in the Navy or leave. "Transition" in this instance means when the Sailor makes a significant career transition (e.g., move, promotion, and separation). Other instruments will capture individual difference measures of psychological (e.g., aptitude, personality, interest, quality of life, background experiences) and sociological (e.g., teamwork, organizational climate, sociocultural, socioeconomic) constructs. Finally, training instructors and work supervisors will be asked to rate their expectations for junior Sailors in general and provide preference ratings for a sample of Sailors in the cohort. Many of the project's instruments are expected to transition to institutional use and serve as continuous indicators of organizational and personnel vulnerability. Figure 4 shows the notional plan for collecting data from the cohort.

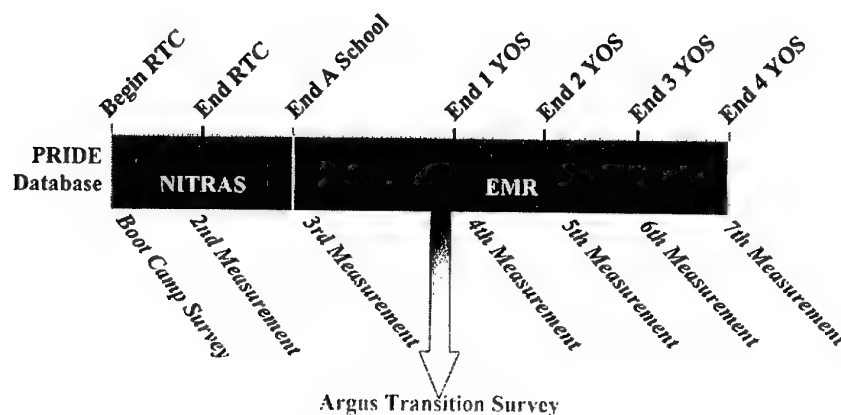


Figure 4. Instruments and Existing Data to be collected from "First Term" cohort

The data collected will be used to develop three specific person-organization fit measures:

Person-Job (P-J)

Person-Group (P-G)

Person-Culture (P-C)

In addition a Navy Commitment Scale, based on a modification of the Myers-Allen Commitment Scale will be produced.

The results will help the Navy better understand attrition, plan interventions, and reduce future losses.

Pavlikova Eva: Pathologic Phenomena in the Society.

Main Personalistic Office ACR, Czech Republic

This presentation portrays the results of surveys conducted by the Research Department of the Czech Ministry of Defense, in particular a research of pathologic phenomena in the Czech army and the Czech Republic on the whole. The main subjects of the research are xenophobia and racist attitudes among the Czech population and members of the Czech armed forces. Further, the presentation includes some information on bullying and drug use in the Czech army.

Methodology

The methodology used in the surveys is based on the use of questionnaires. The Research Department regularly polls three groups of the Czech population - professional soldiers and conscripts once in two years (both groups fill out questionnaires with the assistance of trained interviewers) and representatives of the Czech population 18 years of age and older once a year (respondents answer questions asked by interviewers based on structured questionnaires). All three groups comprise between one and two thousand respondents. As part of the surveys, respondents are asked about current issues concerning defense, the army, and military service. Only a portion of the surveys is focused on pathologic phenomena in the society.

Xenophobia

Xenophobic attitudes of professional soldiers and conscripts were compared within corresponding age groups only - the youngest military professionals and conscripts - as young persons (18 - 25 years) are much more intolerant than their older counterparts. Racist attitudes rise again among older persons, approximately 55 years of age and older. Graph 1 shows that conscripts trust foreigners less than military professionals of the same age. As regards the Czech public, more than a half of persons questioned in 2000 replied that they felt threatened by foreigners in the Czech Republic. The dislike of foreigners has been growing since 1997 (positive replies to the statement "I feel threatened by foreigners in the Czech Republic" - 1997 - 39%, 1998 - 36%, 1999 - 54%, 2000 - 55%).

As far as minorities and their problems, one third of the Czech population are not interested in this issue and one third consider it unimportant. On the other hand, problems faced by minorities are deemed unimportant by only 15% of questioned professional soldiers. When asked about this issue, a substantial number of conscripts answered "I don't know" or "I'm not interested."

Latent racism was assessed through the statement "Czech Lands to Czechs", a slogan of some extremist skinhead groups occasionally chanted at their meetings. This statement was endorsed by more than two fifths of conscripts (1998 - 49%, 2000 - 43%) and somewhat fewer of the youngest (18 - 25 years of age) military professionals (1998 - 38%, 2000 - 40%). Graph 2 presents a comparison of responses of professional soldiers to three statements about their attitudes toward foreigners, minorities in general, and the Roma population in particular. A high number of military professionals would be in favor of a harsher action against Romanies. The

statement "The action against Romanies should be harsher than in the past" was endorsed by 53% professional soldiers and 15% replied "I don't know." It means that only one third (32%) of military professionals do not approve of harsh action against the Roma population. To put this information into a broader context, 65% and 57% of conscripts sanctioned a harsher action against Romanies in 1998 and 2000, respectively. Further analyses discovered an interesting phenomenon: the attitudes of soldiers (professionals and conscripts) are positively influenced by personal experience with members of the Roma minority. This does not mean that soldiers live in the vicinity of Romanies or meet them in means of public transportation, but that they actual work together with members of the Roma community. For example, only one fifth of conscripts believe that Romanies are poor soldiers. Others do not distinguish them from other conscripts or even think that they are better than other soldiers. Similar correlations can be observed among professional soldiers. Professional warrant officers and chief warrant officers who are in frequent contact with Roma soldiers have more positive experiences in this regard than their higher ranked counterparts. There are many commanders in the rank of a warrant officer or chief warrant officer who meet and work together with Roma conscripts on a daily basis (good experiences with Roma conscripts: warrant officers - 54%, chief warrant officers - 51%, junior officers - 49%, senior officers - 48%). Surveys among individual forces have yielded the same results. While in the ground forces 53% of the two thirds of military professionals who come into contact with Roma conscripts have good experiences, satisfaction with Romanies is lower (43%) among logistics professionals where 58% soldiers meet soldiers from this minority group.

Bullying

There are more professional soldiers (73%) concerned about intimidation and bullying among conscripts than conscripts themselves (32%). Nonetheless, even for military professionals this problem has lesser importance. About one quarter of conscripts have experienced intimidation; in 17% and 6% of the cases, respectively, the perpetrators were older conscripts and military professionals (in 2% they were intimidated by other groups).

Drug Use

As regards drug use, which is analyzed in detail in other contributions, both soldiers and the Czech population on the whole are becoming increasingly concerned. Still, drugs, similarly as bullying, are among problems which do not seem to trouble military professionals to a large extent. The need to deal with drug use in the army, however, is becoming more and more important among professional soldiers (1996 - 42%, 1998 - 55%, 2000 - 58%). This is related to the fact that an increasing number of conscripts encounter drug use among their peers during military service (1998 - 57%, 2000 - 64%). Drug use in the army is slightly worsening, mirroring the situation in the Czech society where the trend among the youngest generation is similar.

Summary

More than a half of the Czech population and one fifth of military professionals feel threatened by foreigners in the Czech Republic. Problems faced by minorities are considered as important by one third of the Czech population only. Almost 57% of conscripts believe that action against Romanies should be harsher than in the past; the same opinion is harbored by 53% of professional soldiers.

Three quarters of military professionals and one third of conscripts are concerned about intimidation among conscripts. Twenty-five percent of conscripts have personal experience with bullying - the most frequent perpetrators are older conscripts (17%). Drug use in the armed forces is considered as a problem of lesser importance; however, military professionals are becoming progressively more concerned. Further, the number of conscripts who have encountered drug use among their peers is increasing.

Brancik Jiri: The psychologist in foreign mission. The duty of the psychologist in the mission.

Czech Republic

As a psychologist who belonged to 6. battalion I took a part in a foreign mission SFOR from December 1997 to August 1998. I stayed at training base Cesky Krumlov one month before my departure to Bosnia. The training at the base had already started one and half month before my arrival to the base. Psychological preparation of soldiers was a part of this training and I did not know a lot about its character. According to information I got from officers the psychological training contained lectures. These lectures were concentrated on the topics as: „How to control the stress“, „How to practise the relaxation“. I took part in three day training where I played the role of negotiator who had to get the upset refugee under the control. /I should stress that the situation like that never happened during my mission in Bosnia/.

After a few days on a base that was located in Donja Ljubija I got in touch with the soldiers. These soldiers stayed in four bases. After one month the first problems appeared. These problems then appeared during the whole time of the mission. Some problems had the character of complaining on the quality of food or accomodation. These problems couldn't be usually solved by commanders. The more serious problems were in communication between commander and the soldiers. The soldiers usually complained on the inappropriate behaviour of the commanders in relation to the soldiers. The commanders usually brought this kind of behaviour from Czech bases where they worked before the mission. The soldiers also tried to mention the inability of the commanders to communicate with the soldiers. They felt that the commanders had been affraid of the soldiers and that was why the communication from commanders' side had the character of the orders. Another complains from soldiers' side were because of briefings. These briefings were compulsory but commanders usually omitted them and the briefings were called off. Sometimes it happened that a commander had wanted the soldiers' questions in written form before the briefing had started. The soldiers sometimes did not completely understand the purpose of some orders. I can describe one example of an order that was cancelled later on: If the soldiers wanted to make a phone call from public phone that was located 100 metres from the base they had to wear bulletproof jackets and helmets. But in the evening when they made I joggind on this route they could were only T-shirts. It is clear that the commander can not always explain the purpose of all the orders he gives. But it is good for his authority to sometimes explain the purpose of his orders.

The psychologist can ease these important problems. He usually hear both sides of conflict out and then he tries to show the way how to solve the existing problem. The psychologists role is not easy. He must solve the problem very carefully otherwise one of the side of the conflict - the

soldiers or the commanders can start to suspect the psychologist from injustice. It is clear that the psychologist's role is to be considered as a trustful person for both sides of the conflict at all time.

Next psychologist's duties were to solve personal problems of the battalion members. The problems were usually connected with the separation of the soldiers from their families or girlfriends. A few meetings of soldiers with the psychologist could solve the problems. But if the soldier really wanted to he was sent home without any problems.

Sometimes the soldiers were sent home because of their inability to keep the orders. 15 soldiers were sent home because of it. In these cases the commanders did not consult their decision with the psychologist and I have to admit that the commander was right. The psychologist was informed about the commanders' decision many times but usually there was no reason to change it. At this point I have to mention that the cooperation between the commander and the psychologist was on a very high level and the commander always heard the psychologist's opinion out and respected it. Psychologist, chaplain and spokesman had their own car so that were not depended on the headquarters members.

The importance of the psychologist's role was proved during the accident on 8. of January 1998 when the helicopter crashed in Bosanska Krupa. I accompanied the injured soldiers during their removal to Sipovo hospital and I spent two days with them there. I helped there as an interpreter and psychologist. As a psychologist I tried to ease the result of shock they suffered during the accident. I should point out the professional attitude of British doctors and the other staff that really helped to improve soldiers' mental conditions.

I tried to avoid to test the soldiers during the mission. The only exception was when I made interview with the soldiers who were injured in the helicopter crash. I was supposed to reveal if the soldiers suffered some post-traumatic disorder because of the accident. During the interview I used Roschach test. I want to mention that 18 out of 21 injuries came back to their mission.

The cooperation with chaplain is really important. I and chaplain had the same opinion that even if our jobs are different the duties of the jobs are the same - to help man. That is why we did not consider each other as an opponent and I think that the rest of people had the same feelings.

Suggestions how to improve the preparation for the mission

As I said before the communication between the commander and his soldiers is the most important problem. It would be really good to train the communication during the training on the training bases. I suggest to create a group of psychologists who would train the commanders in social communication and managerial abilities. During these trainings the commanders can train the self cognition. It is obvious that some commanders are not able to deal with their qualm, narcissism, self conceit. I think that the theoretical lectures about the psychology are boring and do not bring a lot of new experience to commanders. The lectures like these usually gave bad point of view to commanders on psychology. Then the commanders talked about the funny experience with some psychologists. It is also important to improve the contact between the soldiers who are on mission and their families so that the soldiers' psychical conditions will be

much better. During my mission I and the chaplain try to improve the situation with the delivery of the mail and to improve the phone contact between the soldiers and their families. The situation partly improved. In certain situations when the soldier asked me or the chaplain for the contact with family, the contact of the soldier with his family was immediately set. If I compare the possibility of the contact of the soldier with his family in NATO and in our units the situation in NATO is much better. As our country is in NATO it would be suitable to solve this problem.

I am aware of the fact that it is three years ago when I took a part in mission. Since that time many things have changed. On the other hand I think that the training of commanders' communication and soldiers should be trained better. This training should become as a part of teaching schedule of future commanders. Our military schools can help with these problem too.

Dylan Schmorrow, Laura Worcester, James Patrey: Augmented Cognition: New Design Principles for Human-Computer Symbiosis.

*Naval Research Laboratory
Potomac Institute for Policy Studies
United States Air Force Academy*

Key Words

Neural Science, Cognition, Simulation, Psychology, Cybernetics

1.0 Background

Military operators are often put into complex human-machine interactive environments that have been shown to fail when a stressful situation is encountered. To help improve readiness, the Augmented Cognition develops technology to enhance human performance using intrinsic capabilities (brain function) through well-understood scientific principles that have heretofore been inadequately exploited in human-computer system designs.

The impact of this technology to the military services is both direct and formidable. These technologies have the potential to enhance operational capability currently beyond reach (e.g., the control of multiple entities by one operator), support the reduction in the numbers of persons required to perform current functions, and improve human performance in stressful operational environments.

2.0 Augmented Cognition Objectives

The objective of Augmented Cognition is to extend, by an order of magnitude or more, the information management capacity of the human-computer integral by developing and demonstrating quantifiable enhancements to human cognitive ability in diverse, stressful, operational environments. Specifically, Augmented Cognition will empower one human's ability to successfully accomplish the functions currently carried out by three or more individuals.

A key objective is to foster development of novel- and improvement of identifiable- prototypes and enabling technologies, in order to experiment with and understand the means by which they may be integrated into existing operational systems, as well as those in development. Augmented Cognition will accomplish this by delivering new design principles for human-computer symbiosis.



Figure 1: A Brain on Today's HCI



Figure 2: A Brain on Augmented Cognition

Augmented Cognition explores the interaction of cognitive, perceptual, neurological, and digital domains to develop improved performance application concepts. The advanced applications will be tailored to military problems in order to demonstrate potential pay-off for operational users. Success will improve the way humans interact with computer-based systems, advance systems design methodologies, and fundamentally re-engineer military decision making.

3.0 Technical Challenges

1. **Rapid Context Switching:** Limited transfer of information to the human when transmitting in parallel via different sensory channels; not enough is known about the parameters of each sensory channel, and very importantly how they interact.
2. **Designing Interfaces Based on Cognition:** Graphical User Interfaces are organized by application, not by content; and largely a single modality – vision.
3. **Developing Decision Forecasting Tools that Exploit Human Inquisitiveness:** “What-if, fast-forwarding” results are typically calculated and displayed based on default visualization techniques (such as monotonic trend lines) which do not exploit human inquisitiveness, and in no way portray what is NOT likely to happen.
4. **Dynamic Modeling of Context:** Models do not work in real time or provide the appropriate level of analysis to determine how concepts within a knowledge space relate.
5. **Monitoring Decision Maker(s) Paths Through Context Rich Knowledge Space:** Primitive pattern-based models are virtually “contextless” – no external awareness; reactive with no understanding of intent or individual differences or strategies.
6. **Continuous, Autonomous Reconciliation of Computer Behaviors to Human Mental Models and Decision-Making Needs:** Cannot determine associative structures (patterns) in any number of factors that might affect human perception, behavior, and decision-making.

7. Designing System Interfaces That Help People Remember: Interfaces are designed to promote ease of use with little or no regard for the impact that they have on users' subsequent cognitive representations.

8. Incorporating Uncertainty, Sensitivity, and Value Representations into Reasoning: Erroneous conclusions are frequently made by experienced individuals in situations where available data is not properly interpreted.

9. Generating Context and Organizing Symbols into Manipulatable Semantic Structures: We are capable of sensing the environment, but not able to convert raw data stream into symbols for processing by a computer. Even if we had environmental information in symbols, we are not capable of generating a meaningful context from it.

4.0 Summary

Augmented Cognition develops and demonstrates technologies to enhance the performance of operational users in perceptual, cognitive, memory, and decision tasks. The focus of the technology development is on the individual human user. Transition of this technology will be guided by early involvement of other relevant projects.

Technology transition to the military has been accelerated by the interest shown by the military services. The challenge for Augmented Cognition is to find near term, factors of improvement applications. For example, the basic single monitor computer – human interface paradigm, through simple techniques of multiple monitors, spatially arranged, has shown to increase performance of simple tasks by a factor nearly 2X. There are other multi-modalities of cognitive enhancement that have been anecdotally reported – it is time to subject these concepts to the rigor of scientific experiment and early prototype evaluation in operational environments.

About the Authors

LCDR DYLAN SCHMORROW, MSC, USN is serving at the Naval Research Laboratory as the Military Scientist for Modeling and Simulation Science and Technology and at the Office of Naval Research and the Defense Advanced Research Projects Agency as a Program Manager in Information Technology and Human Systems. He currently directs science and technology research programs in the areas of augmented cognition, virtual environments, advanced distributed learning, modeling and simulation, and biomedicine. These interdisciplinary programs integrate advances in cognitive, neural, behavioral and computer science to provide technologies vital to ensuring DoD military superiority. He has a Ph.D. in Experimental Psychology from Western Michigan University and Masters degrees in Operations Research, Modeling, Virtual Environments, and Simulation, and Psychology from Western Michigan and the Naval Post Graduate School.

Laura Worcester is a senior research associate at the Potomac Institute of Policy Studies, a Arlington, VA public policy and research institute. She is the deputy director of Human Systems and Information Technology programs. She has a Bachelor of Science degree from Virginia Technology Institute and a Masters degree in Public Administration from American University.

LT James Patrey, MSC, USN is as an Assistant Professor in the Department of Behavioral Sciences and Leadership at the United States Air Force Academy where he focuses primarily on teaching and mentoring cadets. In addition to teaching and advising, he also interacts with cadets through additional tutoring, as the assistant academic officer for one of the cadet squadrons, and contributes to the summer science program. He has a Ph.D. in Cognitive Psychology from the University Illinois.

Closing Remarks**Dr. Yvonne R. Masakowski:**Closing Remarks, 37th IAMPS Symposium 21-25 May 2001 Prague, Czech Republic

I would like to start by thanking the Office of the Ministry of Defense of the Czech Republic and The Office of the General Chief of Staff. I would especially like to extend my appreciation to Dr. Navratil, LT General Sedivy, Dr. Sykora and all of their staff for the excellent arrangements, organization and an extremely valuable program for this symposium. We are grateful to our hosts for their intellect, enthusiasm and warmth, as well as the gift of sharing their beautiful city of Prague with each of us. None of us will ever remain the same for having visited and been touched by Prague and its people.

In closing this conference, I would like to review some of the comments addressed earlier in the week and describe a plan for the future of IAMPS. First, I want to remind us all that of Admiral Clark's (US Chief of Naval Operations) commitment to manpower. He identified five priorities to support the military: specifically, manpower, readiness, quality of life in the service, recruitment/retention and alignment. These issues highlight the topics discussed in the presentations given by our speakers this week, as well as those topics discussed during our workshop sessions.

As the speakers gave their presentations we could all resonate to the themes of their talks. We listened to Dr Adler of Germany and Major Filjak of Croatia describe issues related to the quality of life and to command decision making and performance in the field. This struggle for improving the quality of life for the soldier or sailor is not a unique cultural problem, bounded by geography. Rather, quality of life issues are human issues that impact military performance and have no boundaries. We must develop new approaches for improving the quality of life, providing psychological support and training for troops serving in multi-national operations, such as Kosovo and Bosnia. Recruitment, training and retention issues share similar patterns among peacekeeping troops from all nations. More significantly, the workshop discussions

highlight those topics that we need to address in our research. Regardless of the branch of military service or the nation, the issues are the same.

Each nation faces an increasing demand for an expert military to perform across a broad range of missions around the world. These issues are critical for all nations who have participated in the IAMPS meetings, including NATO, non-NATO, and Partners for Peace (PFP) nations. IAMPS emphasizes the development of research that shapes the future of the military.

The workshop format of the IAMPS meetings is a new approach for facilitating the discussion and development of potential solutions for problems faced by each nation's military. The workshop draws people with expertise in selection, recruitment, classification, training, and retention and facilitates people working together to identify the critical issues; the mission needs of the future and develop methodologies to match skills and abilities so that individuals can perform at an expert level. More significantly, the workshop discussions highlight those topics that we need to address in our research today in order to plan for the military of tomorrow.

Regardless of the branch of military service or the nation, the issues are the same. We must be able to ensure effective mission-essential competencies so that they are available when and where they will be needed, and for an affordable cost.

Our challenge at this meeting has been to focus on solutions within the context of a world in which military budgets shrink and the number of recruits willing to serve has decreased. Reasons for joining the military have changed. "Join the Navy and See the World" is the invitation of the past since travel is available at a fingertip with the Internet. Cultural experiences are global as the Internet connects a new generation to each other. The recruit of today is not the recruit of yesterday. He/she is an expert at surfing the World Wide Web and has a new set of expectations that we cannot ignore. We must change our way of recruiting and training in order to build this new generation of military. The first step toward this goal is to foster international collaboration among nations who are sharing similar concerns. We must look among the research community to facilitate the development of methodologies and technologies that will link our military community together. Training methodologies and technology must be shared in order to ensure optimal performance during multi-national missions.

Now that we have acknowledged that we are facing greater demands with fewer resources, the question is raised, how do we address these issues? Today, more than ever before, the IAMPS symposium plays an important role in identifying how we can come together as military researchers and look for new ways of collaborating to forge a new and more effective military for each of our nations.

The Office of Naval Research has sponsored the IAMPS symposium for 37 years. This is evidence of our commitment to this process. We intend for it to provide a means of developing international research collaboration. We have spoken about the programs that we offer to support this. The Naval International Opportunities Program (NICOP), the visiting scientist program and the conference support program are designed to ensure that discussion leads to meaningful research. IAMPS serves as the bridge to the future military among all nations. During the IAMPS meeting in Split, Croatia, Dr. Craig Dorman provided further evidence of ONR's support for IAMPS by providing a challenge and funding to develop our discussions further by hosting a series of workshops.

Today, we are sponsoring 8 research grants that were awarded as a result of that challenge and several workshops are being planned throughout Europe. The first of these

workshops was held during April at The Hague, The Netherlands and focused on Recruitment and Retention. ONRIFO has recently awarded funds to sponsor a visiting scientists exchange to US Navy Labs including the Naval Aerospace Medical Institute and the Naval Medical Research labs in Pensacola, Fla. Military researchers from the Czech Republic, Croatia and Poland will be visiting these labs to learn new selection and classification methodologies, new software and debriefing techniques and treatment for prisoners of war returned home.

We have already begun planning for next year's annual IAMPS meeting that will be hosted by the Netherlands. In addition, several workshops are currently being planned throughout Europe. The first of these workshops is scheduled to be held in Warsaw, Poland during November 2001. The tentative topic of this meeting will be "Inter-cultural competencies" and is intended to focus on the impact of cultural differences in the military among nations and as they perform in multi-national missions such as Kosovo and Bosnia.

The second workshop is tentatively scheduled to be held in Vienna, Austria during December 2001. The topic of this workshop will be software for selection and classification.

A third workshop is also being planned to be held in Madrid, Spain during February, 2002. The topic of this workshop will be "Shaping the perception of the military in the 21st century".

We encourage your participation and your research. We invite you to work together in these forums to identify those areas that are critical to the future military of your nation. We urge you to explore topics for research collaboration on an international level that will address these issues so that each nation may benefit from the results of your research.

We know that this forum will facilitate the discussion of these issues and look forward to hearing your plans for the future.

With that, I would again like to thank our hosts, the Ministry of Defense and the Office of the General Chief of Staff, the Czech Republic, our speakers and all of the participants for an exceptional symposium and for the opportunity to address you. I look forward to seeing you all next year in The Netherlands, where they will host the 38th IAMPS. I look forward to hearing more about your research at that time!

List of Participants

Adler	Amy	Dr.	US Army Medical Research Unit-Europe	USA	+49-6221-172627
Arndt	Klaus	Rdir, LtCol	German Armed Forces, Personnel Office	Germany	+49-22031052620
Aschenbrenner	Herbert	Leitender Regierungsdirektor	Federal Armed Forces Office, Department for Military Psychology	Germany	+228-5507-1300
Bartone	Paul	Lieutenant Colonel/Doctor	United States Military Academy	USA	+8459382945
Bartoš	Vladimír	Ing. Mgr.	MOD, Czech republic	Czech. Rep.	+420-2-207447
Bender-Horvat	Sanja	Captain	MOD of Croatia, Dept. for Military Psychology	Croatia	+38514568902
Bernardová	Kateřina	Captain, PhD.	Center of Advanced Social Studies of the Chief of the General Staff of the Army of the Czech Republic	Czech Rep.	+420-2-20216063
Berta	John	Dr.	4th Psychological Operations Group	USA	+910-907-3653
Bihari	Sándor	major/Psychologist	Hungarian Defence Force 89th Combined Air Transport Wing	Hungary	+36-56/376-201
Blendell	Carol	psychologist	Defence evaluation and Research Agency (DERA)	UK	+44-1959-515724
Boss	Patrick	Oberl., lic. phil.	University of Zurich, Dept. of Applied Psychology	Switzerland	+41-16343744
Brancík	Jiří	Lt.Col., PhD.	Military Hospital, Brno	Czech Rep.	voj. 445591, 05/41181111
Castro	Carl	Major	US Army Medical Research Unit-Europe	USA	+49-6221-172626

Charvat	Miroslav	Maj., Mgr., Ing.	Head of Local Forces and Defence	Czech. Rep.	+42020212 018
Costa	Antonio	Major	Ex-Centro de psicologia aplicada do exercito	Portugal	+21-849- 5560
Court	Michael	Mr	Command Scientific Support Branch, HQ Personnel and Training Command	UK	+44-1452- 412612 ex 5554
Cervinková	Hana	Mgr.	Stress Research Centre of Military University Vyškov	Czech Rep.	+420-2-20- 207554
Delinčák	Jano	mjr. PhDr.	HQ Ground Forces	Slovakia	+421-960- 332796
Dorman	Craig	Dr., Rear Admiral	ONR	USA	
Drillings	Michael	PhD.	U.S. Army Research Institute	USA	+703-617- 8641
Falar	Josef	PhDr., CSc.	Vědecké a Servisní pracoviště TVS AČR	Czech Rep.	+420-2-20 204641
Fedorková	Jolana	Mgr.	VU 8289 Prostějov	Czech Rep.	
Filjak	Tomislav	Major	MOD of Croatia, Dept. for Military Psychology	Croatia	+38514568 902
Haysman	Kate	Ms	Command Scientific Support Branch, HQ Personnel and training Command	UK	+44-1452- 412612 ex 5531
Hodný	Jiří	Mgr.	ÚMPV, Vojenská akademie v Brně	Czech. Rep.	alc. 443 744
Charvat	Miroslav	Maj./psych.	Ministry of Defence, Department of Social Policy	Czech. Rep.	+42020212 018
Isari	Silvia	psychologist	MOD Romania, Dept. for Military Psychology	Romania	+40141135 02
Jacobi	Barbara	psychologist	Inst. of Military Psychology/Royal Danish Defence College/Danish Armed Forces	Denmark	+45-39- 151915
Jager	Bohuslav	mjr Mgr.	HQ Territorial Defence forces, Tábor	Czech. Rep.	+361-704 182

Jandejsek	Petr	Mgr.	Stress Research Centre of Military University Vyškov	Czech. Rep.	+420-2-20- 207447
Jetten	Hans	drs	Behavioural Sciences Division, Royal Netherlands Army	NL	
Jičínská	Kateřina	Mgr.	ÚMPV, Vojenská akademie v Brně	Czech. Rep.	alc.442 998
Johansson	Antero	psychologist	Finish Defence Forces Education Development Centre	Finland	+358-9- 181-62711
Kaló	Atila	Capt./Psych.	Hungarian Air Force	Hungary	fax :+36- 88/543-080
Klose	Jiří	Lt.Col/PhD	Central Military Hospital, Prague, Dept. of Psychology	Czech Rep.	20 20 3470
Kopecky	Michal	Maj., Ing.	Stress Research Centre of Military University Vyškov	Czech Rep.	+420 - 2- 20207444
Král	Pavel	Mgr.	Central Military Hospital, Prague, Dept. of Psychology	Czech Rep.	20 20 3465
Krausová	Zuzana	MUDr.	Central Military Hospital, Psychiatry Department	Czech Rep.	+420-2- 90059240, 0604-715 429
Krpenská	Alexandra	mjr. PhDr.	Ministerstvo obrany ČR	Czech Rep.	+420-2- 202713
Lassak	Werner	M.A.	Center of Advanced Social Studies of the Chief of the General Staff of the Army CR	Czech Rep.	+420-2- 20207354
Lávička	Luděk	kpt., Mgr., Ing	VÚ 4312, Strakonice	Czech. Rep.	+420-342- 306 107
Lescreve	Francois	Lt. Col./Psych.	Belgian Armed Forces Defence Staff - Personel Division	Belgium	+32-2- 70130502
Leveille	Luc	Lieutenant	Directorate for Human Resource Research and evaluation (DHRRE)	Canada	+613-996- 0412
Lindholm	Merete	psychologist	Inst. of Military Psych./Royal Danish DefenceCollege/ Danish Armed Forces	Denmark	+45-39- 151933

Lohwasser	Christian	MinR	Ministry of Defence, Military Psychology Service	Austria	+43-1- 5200- 55401
Lytaev	S.A.	Colonel, prof.	Military Medical Academy, St. Petersburg, Russia	Russia	+7-812 393 45 43
Maric	Dubravka	1st Lt.	Dept. of Military Psych, MoD Croatia	Croatia	+385- 114567447
Masakowski	Yvonne	Dr.	ONRIFO, London	USA	+44-20- 7514-4942
Mlčoch	Jiří	Lt.Col., Mgr.	Ministry of Defense - General Staff	Slovakia	+421-960- 313756
Molloy	Jules	scientist	Defence evaluation and Research Agency (DERA)	UK	+44-1959- 514699
Muzikant	František	PhDr.	Military Hospital, Brno	Czech Rep.	
Mylle	Jacques	Prof,Dr.	Royal Military Academy	Belgium	+32-2- 7376600
Nyman	Kai	psychologist	Finish Defence Forces Education Development Centre	Finland	+358-9- 181-62711
Odehnalová	Vladimíra	Capt.	HQ Ground Forces Olomouc	Czech Rep.	
Oliveira	Alvaro	Tenent Col. Dr.	Centro de Psicologia Aplicada de Exercito	Portugal	+217 95 2789
Palánová	Barbora	M.A.	Center of Advanced Social Studies of the Chief of the General Staff of the Army CR	Czech Rep.	+420-2- 20207348
Pamplona	Aurelio	Colonel	Ex-Centro de psicologia aplicada do exercito	Portugal	+21-493- 0004
Patrey	James	LT/USN	HQ USAFA/DFBL	USA	+719-333- 9891
Pavlíčková	Hana	Mgr.	Center for Social Studies	Czech Rep.	+420-20 207 359
Pavlíková	Eva	Mgr.	Research Dept. of Ministry of Defence, Prague	Czech. Rep.	+420 - 20- 212192
Pertea	Gheorghe	Col. PhD	MOD Romania, Dept. for Mil. Psychology	Romania	+40141135 02
Pokorný	Vratislav	Mgr., Ing.	Military Academy Brno	Czech Rep.	

Pollack	Kristina	AVDDIK	FM/HUV	Sweden	08-7887545
Preiss	Marek	Mgr.	Prague Psychiatric Centre	Czech Rep.	fax:66003366
Ptacek	Radek	Mgr.	Ministry of Defence, Department of Social Policy	Czech. Rep.	+42020212018
Raška	Pavel	PhDr.	Personalia Praha	Czech Rep.	6603 3004
Reed	Ronald	Prof., Col.	EOARD- European Office of Aerospace Research and Development, US Air Force	USA	+44 207 514 4318
Ribeiro	Rui	Major	Portuguese Air Force	Portugal	+351-217519562
Rodel	Gerd	Dr., Reg Direktor	Zentrum für Nachwuchsgewinnung der marine	Germany	+49-4421792124
Rowe	Murray	Director	Navy Personnel Research, Studies and Technology	USA	+901-874-4633
Schmorrow	Dylan	LLDr/Dr	Office of Naval Research	USA	+703-696-0306
Skrč	Andreja	Cpt.	1.ODP VLZO	Slovenia	+3861 581-3050
Slop	Helmut	Mag. phil.	Austrian International Peace Support Command	Austria	+43-21-6863-1302230
Smerecký	Jozef	Col.ret, PaedDr PhD	Military Secondary Air Force School	Slovakia	+421-95-6512549
Smolinski	Steven	Capt.	ONRIFO, London	USA	+44-20-7514-4943
Soh	Star	Major PhD.	Applied Behavioural Sciences Department, MOD	Singapore	+65-3131540
Sýkora	Jaroslav	Col.Ret., Ph.D	Military University Vyškov	Czech Rep.	+420 - 2-20207441
Štrobl	Daniel	M.A.	Center of Advanced Social Studies- Expert Dept.	Czech Rep.	+420-2-20207454
Telcová	Jana	Mgr.	ÚMPV, Vojenská akademie v Brně	Czech. Rep.	alc.442 882
Tichý	Vlastimil	Lt.Col., MD	Central Mil. Hospital, Psychiatry Dept.	Czech Rep.	420-2-20203430

Tislarić	Goran	Lt.	Dept. of Military Psychol., MoD Croatia	Croatia	+385-1-4567447
Tomko	Anton	Mjr. ret., Dr./ Psychologist	Ministry of Defence, Department of Social Policy	Czech Rep.	+42020212018
Trlek	Mladen	Captain	MOD of Croatia, Dept. for Military Psychology	Croatia	+38514568902
Turks	Janis	Major		Latvia	
Urychová	Blanka	Mgr.	Central Military Hospital, Prague, Dept. of Psychology	Czech Rep.	20203437
van Zevenbergen-Snel	Beatrice	drs	Behavioural Sciences Division, Royal Netherlands Army	NL	
Váňová	Andrea	Mgr.	VÚ 8280, Prostějov	Czech Rep.	
Vlčková	Jiřina	PhDr	ÚMPV, Vojenská akademie v Brně	Czech Rep.	alc. 442882
Weber	Wolfgang	RDir	Bundesministerium der Verteidigung	Germany	+49-228-127438, fax +49-228-12-1335
Žáčková	Gabriela	M.A.	Center of Advanced Social Studies of the Chief of the General Staff of the Army of the Czech Republic	Czech Rep.	+420-2-20207362

Appendix - Summary of the Workshops

IAMPS 2001 WORKSHOP Sessions and Procedures

All workshops were organized into three sessions. The first session included technical presentations by subject matter experts in the particular topic area. Time was set aside following each presentation for questions, comments and group discussion. During the second session, participants were assigned to one of three groups and were asked to "focus on the objective of producing a prioritized list of key issues" for the particular workshop topic.

A facilitator within each group was responsible for eliciting and collating issues identified by the participants and for reaching consensus on the prioritization of each issue into one of three categories: high, medium, or low importance. At the end of this session, participants were asked to provide written comments concerning the reason(s) why they considered an issue to be important and to assess the prioritized list of issues identified within their respective groups.

During the third session, participants from the three groups were reconvened to review and discuss the S&T issues identified, after which group consensus was reached on issues considered to be of high importance.

The following paragraphs summarize the S&T topics identified in each of the three IAMPS workshops that were classified and prioritized.

Group 1: Leadership and Management

Facilitators: LT COL F. Lescreve

Major T. Filjak

Reporter: Dr. M. Drillings

Group one identified and prioritized the following issues:

High Importance:

- 1) Leader training and development
- 2) Competencies that leaders need
- 3) Implications for leaders of emerging missions
- 4) Developing and conveying leaders' vision

Medium Importance:

Identify leadership styles
Leadership under stress
Commitment of leader to armed forces
Leaders' adjustment to new technologies
Adjusting to new attitudes of youth

Low Importance:

Leader selection
Leadership vs. Management
Computer modeling of leadership
Distributed leadership

Decision making
Leader credibility
Leader influence on retention

* Some topics may have been included in more important topics

The group discussed the importance and feasibility of addressing each of these issues and classified them as follows:

High - High

Leader training and development
Competencies that leaders need
Developing and conveying leaders' vision

High - Medium

Implications for leaders of emerging missions

Medium - Medium

Distributed leadership
Leadership under stress
Leaders' adjustment to new technologies
Adjusting to new attitudes of youth
Commitment of leaders to armed forces
Leadership vs. Management

Following the classification of the above issues, the group developed a plan of action to address these issues:

A Research Concept
--- not sanctioned ---

Requirements

Multiple nations contribute
Leadership issue
Applied research
less than 100K
Potential payoff to multiple nations

Assumptions

KFOR and similar peacekeeping missions common to several armies
Different approaches to how to accomplish mission
Fortress - interaction
Volunteers - assigned
Armor - MPs -
Different command structures
Different previous experience

Outline

Comparison of experiences of several nations
Dimensions

situation
task
people

Implications for leadership

competencies
mission analysis factors
comparison to training received

Examine associated measures – cohesion, retention, clinical issues

Training and selection implications of analysis

Milestones

Development of interested parties
Development of research plan, responsibilities, and budget
Conduct interviews
Examine doctrines and literature
Analysis, conclusions
Deliverables
Research proposal
Workplan
Data
Analysis
Conclusions

Group 2: Psychological Impacts of Military Service

Facilitators: Dr. H. Slop

Dr. W. Weber

Reporter: Dr. W. Weber

Group two identified and prioritized the following issues:

High Importance:

Prevention & Treatment of negative effects after deployment

- 1) Why has the job of the soldier becomes less popular?
- 2) What are the new demands in the order to cope with inter-cultural difference in a military context?

Low Importance:

- 3) What are the new demands in the order to cope with evaluation new technologies?

They discussed the level of research for each topic with the following results:

Prevention and treatment issues: High importance, high level of research

Inter-cultural differences: High importance, low level of research

Additional Questions raised in response to discussions on these issues:

Why is the job of a soldier is becoming less popular?
What are the prevention and treatment of negative effect after deployment?
What are the important demands to cope with intercultural differences in military context?
What are the important demands to cope with new military technologies?
The group developed a plan of action to respond to the following questions:
Plan of action for question 1: Why is a job of a soldier becoming less important?
Operationalization
Literature study
Bibliographies
Survey on retention, attrition & on job satisfaction
Methods
Inter-countries survey
Timeframe
2 year study \$200 000

Group 3: Psychological Impacts of Military Service

Facilitators: Dr. Yvonne Masakowski

Dr. J. Mylle

Reporter: Ms. H. Cervinkova

Group one identified and prioritized the following issues:

High Importance

- 1) **Personal Differences**
- 2) **Evaluation**
- 3) **Performance and bio-psycho-social aspects of stress**

The group developed a plan of action as follows:

Define the issues

List personal differences

Why are these differences important

Define the common metric and elaborate

Instruments

Collect data

common vs. specific across nations

dynamic vs. static

state vs. trait

Establish criteria

Validate the instruments through field test

Understand the meaning of the results

•Duration: 3 years

•Participants:

- Lead Nation: Czech Republic
- Contributing Nations: Belgium, Croatia, Denmark, Finland, Germany, Portugal, Romania, Russia, Slovakia, United States
- Funds Requested: USD 500K

Milestones & Deliverables were outlined as follows:

- Phase 1: The Method Workshop
- Phase 2: Collecting Information
- Phase 3: Expert Groups and Task Groups
- Phase 4: Collecting and Distributing Data
- Phase 5: Accreditation, Validation, Verification
- Phase 6: Application and Follow-up

Final Products Proposed:

- **Virtual Community/Website**
 - **Final Result of the Study:** Develop an international tool that will serve as a standard
 - for assessing personal differences and performance in a multi-national context in order :- to optimize training and to enhance the performance level, cohesion and reduce attrition in the field.
-